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Section 1

General Information

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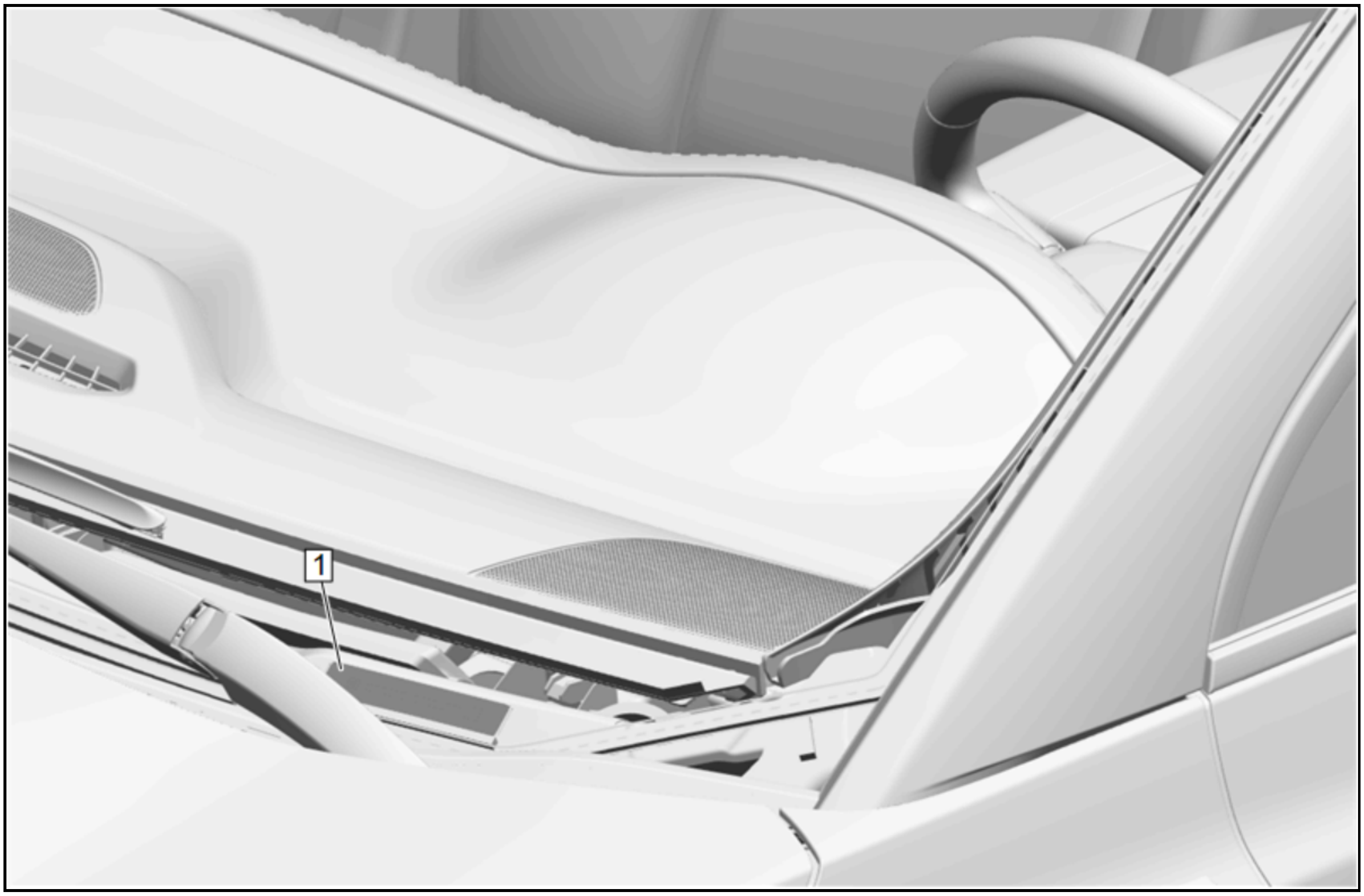
General Information

Introduction

Vehicle, Engine and Transmission ID and VIN Location, Derivative and Usage



The vehicle identification number (VIN) plate is the legal identifier of the vehicle. The VIN plate is located on the upper left corner of the instrument panel. The VIN number can be seen through the windshield from the outside of the vehicle:

Vehicle Identification Number (VIN) System

Position	Definition	Character	Description
1	Country of Origin	1	United States
2	Manufacturer	G	General Motors
3	Vehicle Brand/Type	D	GMC Incomplete Truck
		T	GMC Truck

Vehicle Identification Number (VIN) System (cont'd)

Position	Definition	Character	Description
4	GVWR/Brake System/Body Style	N	6,001–7,000 lbs/Hydraulic/Commercial Special Cutaway, Two (2) Door Cab pick-up, Motor Home Chassis
		P	6,001–7,000 lbs/Hydraulic/Crew Cab
		R	6,001–7,000 lbs/Hydraulic/Extended Cab
		U	7,001–8,000 lbs/Hydraulic/Crew Cab
		V	7,001–8,000 lbs/Hydraulic/Extended Cab
		0	9,001–10,000 lbs/Hydraulic/Commercial Special Cutaway, Two (2) Door Cab pick-up, Motor Home Chassis
		1	9,001–10,000 lbs/Hydraulic/Crew Cab
		2	9,001–10,000 lbs/Hydraulic/Extended Cab
		3	10,001–14,000 lbs/Hydraulic/Commercial Special Cutaway, Two (2) Door Cab pick-up, Motor Home Chassis
		4	10,001–14,000 lbs/Hydraulic/Crew Cab
		5	10,001–14,000 lbs/Hydraulic/Extended Cab
5/6	Chassis/Series	8/L	GMC Sierra 2500 Fleet/Base 2WD
		8/M	GMC Sierra 2500 SLE 2WD
		8/N	GMC Sierra 2500 SLT 2WD
		8/P	GMC Sierra 3500 Fleet/Base 2WD
		8/R	GMC Sierra 3500 SLE 2WD
		8/S	GMC Sierra 3500 SLT 2WD
		9/L	GMC Sierra 2500 Fleet/Base 4WD
		9/M	GMC Sierra 2500 SLE 4WD
		9/N	GMC Sierra 2500 SLT 4WD
		9/P	GMC Sierra 2500 SLT 4WD
		9/R	GMC Sierra 2500 Denali 4WD
7	Restraint System	E	RPO AY0 – Active Manual Belts, Airbags – Driver and Passenger – Front (1st row), Front Seat Side (1st row), Roof Side (all seating rows)
8	Engine Type	Y	L5P - ENGINE DIESEL, 8 CYL, 6.6L, DI, V8, TURBO, DURAMAX, GEN 5
		7	L8T - ENGINE GAS, 8 CYL, 6.6L, SIDI, VVT, CAST IRON
9	Check Digit	—	Check Digit
10	Model Year	P	2023
11	Plant Location	F	Flint, Michigan, USA
12–17	Plant Sequence Number	—	Plant Sequence Number

6.6L (L5P) Engine ID and VIN Derivative Location

Engine Identification

6.6L (L8T) Engine ID and VIN Derivative Location

Engine Identification

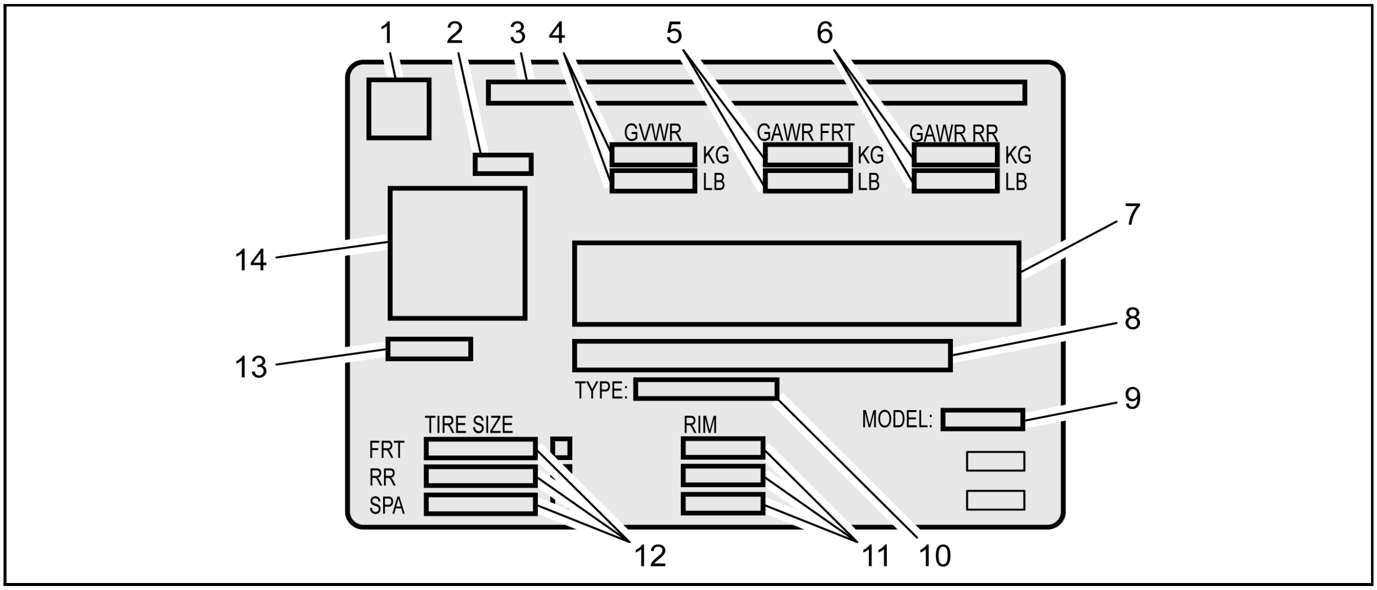
6L90 (MYD) Transmission ID and VIN Derivative Location

Transmission Identification Information

10L1000 (MGM MGU) Transmission ID and VIN Derivative Location

Transmission Identification Information

Vehicle Certification, Tire Placard, and Anti-Theft Label



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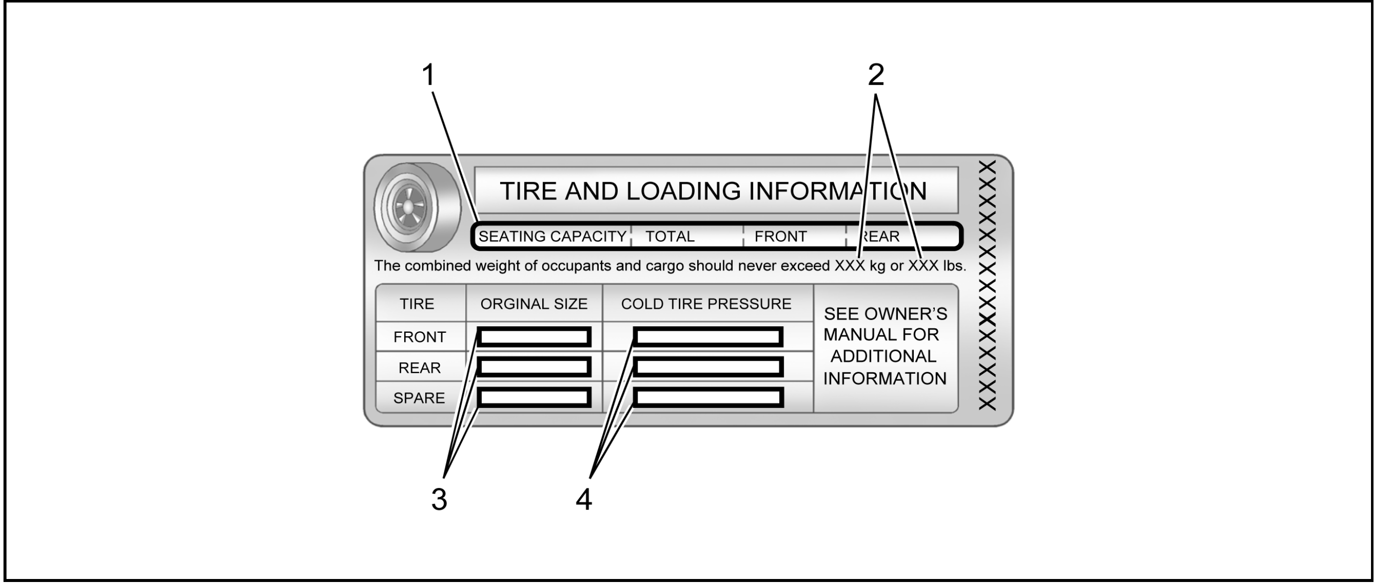
Vehicle Certification Label

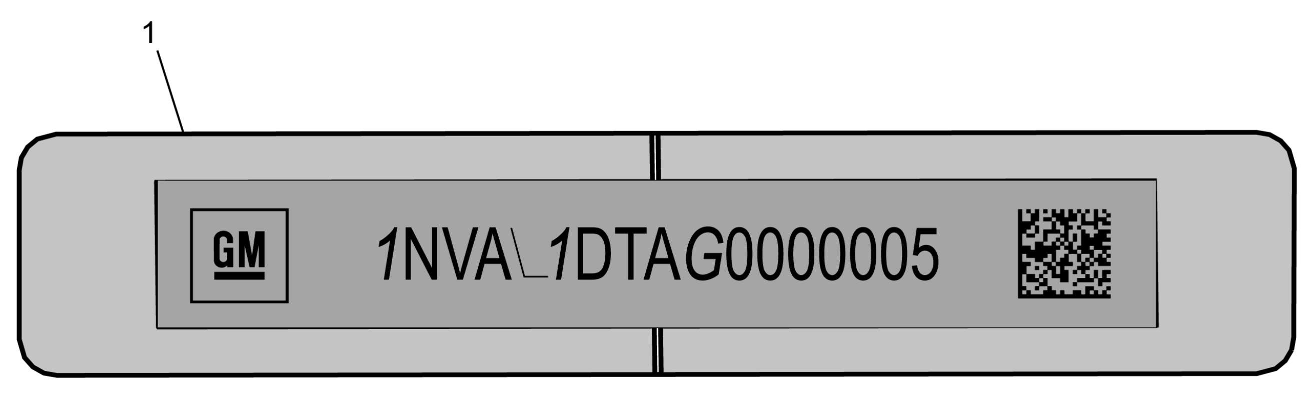
Callout	Description
A vehicle-specific Certification label is attached to the vehicle's center pillar (B-pillar) and displays the following assessments:	
1	Logo
2	Final Date of Manufacture (Month and Year MM/YY) Date of manufacture is to reflect the date that the vehicle is counted as built. In those cases where a replacement label is needed, the replacement label should reflect the actual build date not the date of replacement.
3	Name of Manufacturer
4	Maximum Gross Vehicle Weight Rating (GVWR)
5	Maximum Gross Axle Weight Rating (GAWR) - Front
6	Maximum Gross Axle Weight Rating (GAWR) - Rear
7	Certification Statement
8	Vehicle Identification Number (VIN)
9	Engineering Model Number
10	Vehicle Class Type (Pass Car, etc.)
11	Original Equipment Rim Size
12	Original Equipment Tire Size
13	Paint Code
14	QR Code Once the QR code is scanned, the information will appear in this order on your smartphone or laptop: VIN, Model Year, Model, Build Month, Year, Engineering Book, Vehicle Order Number, 3 Digit RPO Codes sorted alphanumerically and the Paint Code (same code appears the lower left of the QR code)


1
2
TIRE AND LOADING INFORMATION
SEATING CAPACITY
TOTAL
FRONT
REAR
The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs.
TIRE
ORGINAL SIZE
COLD TIRE PRESSURE
FRONT
REAR
SPARE
SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION
XXXXXXXXXXXXXX
3
4

4962282

Tire Placard

Callout	Description
A vehicle-specific Tire and Loading Information label is attached to the vehicle's center pillar (B-pillar) and displays the following assessments:	
1	Specified Occupant Seating Positions
2	Maximum Vehicle Capacity Weight
3	Original Equipment Tire Size
4	Tire Pressure, Front, Rear, and Spare (Cold)


1
GM
1NVA_1DTAG0000005

4962289

Anti-Theft Label

Callout	Description
This legal identifier is in the front corner of the instrument panel, on the driver side of the vehicle. It can be seen through the windshield from outside. The Vehicle Identification Number (VIN) also appears on the Vehicle Certification and certificates of title and registration.	
1	Vehicle Identification Number (VIN)

RPO Code List

The following table provides the description of the Regular Production Option (RPO) codes that are available on the vehicle. The vehicle's RPO list is printed on the Service Parts Identification Label.

RPO	Description
00B	IDENTIFICATION-NOT EQUIPPED WITH INTEGRATED TRAILER BRK CONTROL
00G	IDENTIFICATION-NOT EQUIPPED WITH HEATED STEERING WHEEL
00V	IDENTIFICATION-NOT EQUIPPED WITH FRONT HEAT/VENT SEATS
00Y	IDENTIFICATION-NOT EQUIPPED WITH REAR PARK ASSIST
00Z	IDENTIFICATION-NOT EQUIPPED WITH FRONT AND REAR PARK ASSIST
04O	IDENTIFICATION-NOT EQUIPPED WITH FRONT VENT SEATS
06Z	IDENTIFICATION-NOT EQUIPPED WITH BATTERY CURRENT SENSING
1SA	PACKAGE-OPTION 01
3SA	PACKAGE-SLE OPTION 1
4AA	INTERIOR TRIM-JET BLACK
4F2	INTERIOR TRIM-JET BLACK / KALAHARI
4JJ	INTERIOR TRIM-GIDEON/VY DK ATMOSPHERE
4JR	INTERIOR TRIM-DARK ASH GRAY/VY DK ATMOSPHERE
4SA	PACKAGE-SLT OPTION 1
4SB	PACKAGE-SLT OPTION 2
5A7	WHEEL SPARE-NONE
5JY	ACCESSORY-TONNEAU - RR COMPT - SOFT FOLDING
5LE	ACCESSORY-GARAGE DOOR OPENER
5SA	PACKAGE-DENALI OPTION 1
5VE	ACCESSORY-EXHAUST TIP - DESIGN 5
5VG	ACCESSORY-EXHAUST TIP - DESIGN 4
5VI	ACCESSORY-TIE DOWN RINGS - CARGO AREA
63G	ACCESSORY-TAILGATE ASSIST LIGHTING
65C	LABEL, WARNING-CALIFORNIA, PROP 65 COMPLIANT
6K5	SALES PACKAGE-CONVENIENCE II
77S	LABEL, REGULATORY-CALIFORNIA, SECTION 177 STATES
9J4	BUMPER RR-(NONE)
9L3	TIRE SPARE-NONE
9L7	EQUIPMENT-ACSRY WRG JUNC BLK
A2S	ADJUSTER DRIVER SEAT-4WAY, DISCONT MAN RECLINE, MAN FORE/AFT
A2X	ADJUSTER DRIVER SEAT-8WAY, PWR RECLINE, PWR FORE/AFT, PWR HEIGHT, PWR TILT
A45	MEMORY-SEAT ADJUSTER, MIRROR, POWER, DRIVER, PERSONALIZATION
A48	WINDOW RR-FULL WIDTH, SLIDING, POWER
A50	SEAT-FRT BKT
A60	LOCK CONTROL RR CMPT-LID, TAILGATE, KEY ACTIVATED
A68	SEAT RR-SPLIT, FOLDING
A6Q	WINDOW REG DRVR DR-MANUAL OPERATED
A6R	WINDOW REG PASS DR-MANUAL OPERATED
A7E	ADJUSTER PASS ST-4WAY, DISCONT MAN RECLINE, MAN FORE/AFT
A7K	ADJUSTER PASS ST-8WAY, PWR RECLINE, PWR FORE/AFT, PWR HEIGHT, PWR TILT
AAK	ACCESSORY-FLOOR LINER - CONTOURED - ALT DESIGN 1
AE7	SEAT-FRT SPLIT, DRIVER, PASS
AED	WINDOW REG PASS DR-POWER OPERATED,EXPRESS DOWN
AEF	WINDOW REG PASS DR-POWER OPERATED, EXPRESS UP/DOWN
AEQ	WINDOW REG REAR DR-POWER OPERATED, EXPRESS DOWN
AKO	WINDOW TYPE-PRIVACY
AKP	WINDOW TYPE-SOLAR ABSORBING
AL0	SENSOR INDICATOR-INFLATABLE RESTRAINT, FRT PASS/CHILD PRESENCE DETECTOR
ANM	SALES PACKAGE-FIRE AND RESCUE
AQQ	LOCK CONTROL, ENTRY-REMOTE ENTRY, EXTENDED RANGE (MY 09 AND FUTURE)
ATH	LOCK CONTROL, ENTRY-REMOTE ENTRY, EXTENDED RANGE, PASSIVE ENTRY, ALL DOORS
AU3	LOCK CONTROL-SIDE DR, ELEC
AVI	RESTRAINT PROVISIONS-ADJUSTABLE GUIDE LOOP

RPO	Description
AXG	WINDOW REG DRVR DR-POWER OPERATED, EXPRESS UP/DOWN
AXK	VEHICLE TYPE-TRUCK
AY0	RESTRAINT SYSTEM-SEAT, INFLATABLE, DRIVER & PASS FRT, SEAT SIDE, ROOF SIDE
AZ3	SEAT-FRT SPLIT, DRIVER, PASS, FULL FEATURE CENTER
B1J	LINER-RR WHEELHOUSE
B26	SALES PACKAGE-SAFETY PACKAGE VAR. 1
B30	COVERING FLOOR-CARPET
B32	COVERING FRT-FLOOR MATS, AUX
B33	COVERING REAR-FLOOR MATS, AUX
B34	COVERING FRT-FLOOR MATS, CARPETED INSERT
B35	COVERING REAR-FLOOR MATS, CARPETED INSERT
B3L	STEPS, RUNNINGBOARD-SIDE, RETRACTABLE, POWER, BLACK
B59	SALES PACKAGE-FUNCTIONAL PACKAGE
BG9	COVERING FLOOR-RUBBER
BGP	SALES PACKAGE-SAFETY PACKAGE VAR. 2
BHP	COVER-WINTER GRILLE
BKE	COVERING REAR-FLOOR MATS, FLOOR LINER CARPET INSERT
BKF	COVERING FRT-FLOOR MATS, FLOOR LINER CARPET INSERT
BRS	STEPS, RUNNINGBOARD-SIDE, RETRACTABLE, POWER, BRIGHT
BTM	SWITCH-START, KEYLESS
BTV	REMOTE START-VEHICLE
BVQ	STEPS, RUNNINGBOARD-SIDE, TUBULAR, CHROME
BWN	STEPS-CORNER ASSIST, BUMPER
C32	HEATER AIR SYSTEM-HEATING/ DEFROSTER SYSTEM, REINFORCED, ELECTRIC
C49	DEFOGGER-RR WINDOW, ELECTRIC
C59	VENT-AIR, CONSOLE, RR
C67	HVAC SYSTEM-AIR CONDITIONER FRT, ELECTRONIC CONTROLS
CF5	ROOF-SUN, GLASS, SLIDING, ELEC
CGN	LINER-PUBX, SPRAY ON
CGO	COLLECTION GVW-COLLECTION GVW LESS THAN OR EQUAL TO 10,000 LBS
CJ2	HVAC SYSTEM-AIR CONDITIONER FRT, AUTO TEMP CONT, AUX TEMP CONT
CMD	PLANT CODE-FLINT, MI, USA (TRK)
CMT	SALES PACKAGE-GOOSE NECK/5TH WHEEL PREP AND CAMERA
CTT	HITCH ASSIST-GUIDELINES

RPO	Description
CWM	SALES PACKAGE-TECHNOLOGY
D07	CONSOLE-FRT COMPT, FLOOR, CUSTOM
D31	MIRROR I/S R/V-TILT
D72	HANDLE O/S DOOR-BLACK
D75	HANDLE O/S DOOR-BODY COLOR
DBG	MIRROR O/S-LH & RH, WFOV, MAN EXT, MAN FOLD,HTD, TURN SIG IND, R/CON, ELECT, AUX CLEAR, FLAT/CONV DR/PASS
DD8	MIRROR I/S R/V-LT SENSITIVE
DH6	MIRROR I/S FRT VAN-LH & RH, SUNSHADE, ILLUM
DLN	MIRROR O/S-LH & RH, ELEC REMOTE CONTROL, HEATER, MANUAL FOLD, FLAT/DRVR, FLAT/PASS
DNS	EQUIPMENT-SUPPLIER INSTALLED
DP6	MIRROR PROVISIONS-HOUSING, PAINTED
DP9	MIRROR PROVISIONS-HOUSING, CHROME
DRC	MIRROR I/S R/V-LT SENSITIVE, PARTIAL VIDEO DISPLAY
DRZ	MIRROR I/S R/V-LT SENSITIVE, FULL VIDEO DISPLAY
DUD	MIRROR O/S-LH & RH, WFOV, MANUAL, MAN FOLD, MAN EXT, FLAT/COVN DR/PASS
DWI	MIRROR O/S-LH&RH,WFOV,MAN EXT, PWR FLD,HTD,TURN SIG,R/CON,ELEC, AUX CARGO,AUX CLR,PERM LIGHT,FLAT LT SENS DR/PAS
DZC	MIRROR O/S-LH&RH,WFOV,PWR EXT, PWR FOLD,HTD,TURN SID,R/CON MEM, AUX CARGO,AUX CLR,PERM LT,FLAT LT SENS DR/PAS
DZW	CHASSIS-DUAL REAR WHEEL, RIDE & HANDLING
E20	HANDLE O/S DOOR-CHROME
E63	BODY EQUIPMENT-FLEETSIDE PICK-UP BOX
EF7	COUNTRY-UNITED STATES OF AMERICA (USA)
EU2	ACCESSORY-WHEEL - 18" X 8.0 - J - ALUMINUM - DESIGN 2
F48	CHASSIS DRIVE LINE-ALL WHEEL DRIVE (AWD)/FOUR WHEEL DRIVE(4WD), DRIVER SELECT
F60	SPRING FRONT-HEAVY DUTY
FE9	CERTIFICATION-EMISSION, FEDERAL
FHS	VEHICLE FUEL-GASOLINE E85
FHX	VEHICLE FUEL-DIESEL B20
FJW	VEHICLE FUEL-GASOLINE E15
FPF	EQUIPMENT-EMISSION-DIESEL DPF MANUAL REGENERATION
G1W	PRIMARY COLOR-EXTERIOR, ABALONE WHITE TRICOAT(140X)

RPO	Description
G7C	PRIMARY COLOR-EXTERIOR, PULL ME OVER RED SOLID (130X)
G80	AXLE POSITRACTION-LIMITED SLIP
GA0	PRIMARY COLOR-EXTERIOR, SOME KINDA BLUE MET -1 (619D)
GAN	PRIMARY COLOR-EXTERIOR, SWITCHBLADE SILVER MET (G) 636R
GAZ	PRIMARY COLOR-EXTERIOR, SUMMIT WHITE (G) 8624
GB8	PRIMARY COLOR-EXTERIOR, BLACK MEET KETTLE MET (384A)
GBA	PRIMARY COLOR-EXTERIOR, BLACK (G) 8555
GED	PRIMARY COLOR-EXTERIOR, WILDER MET-1 (244F)
GFF	TRIM PACKAGE-BASE
GFG	TRIM PACKAGE-AT4
GFI	TRIM PACKAGE-SLE
GFU	TRIM PACKAGE-SLT
GFW	TRIM PACKAGE-DENALI
GHR	PRIMARY COLOR-EXTERIOR, CANNON MET-1 (610G)
GSK	PRIMARY COLOR-EXTERIOR, CHERRY POP TINT-1 (252F)
GT4	AXLE REAR-3.73 RATIO
GTY	AXLE-WIDE TRACK
GU6	AXLE REAR-3.42 RATIO
H0U	INTERIOR TRIM CONFIG-CLOTH, LEVEL 2, JET BLACK
H1T	INTERIOR TRIM CONFIG-CLOTH, LEVEL 1, JET BLACK
H1Y	INTERIOR TRIM CONFIG-LEATHER, LEVEL 2, JET BLACK
H2G	INTERIOR TRIM CONFIG-VINYL, LEVEL 1, JET BLACK
H2X	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, JET BLACK
HS1	ALERT-SAFETY HAPTIC SEAT
HV5	INTERIOR TRIM CONFIG-CLOTH, LEVEL 2, GIDEON/VY DK ATMOSPHERE
HVD	INTERIOR TRIM CONFIG-LEATHER, LEVEL 2, JET BLACK/KALAHARI
HVE	INTERIOR TRIM CONFIG-LEATHER, LEVEL 2, GIDEON/VY DK ATMOSPHERE
HVH	INTERIOR TRIM CONFIG-LEATHER, LEVEL 4, MED DARK ASH GRAY / VY DK ATMOSPHERE
ICY	ACCESSORY-ARCTIC HOSE - POWER STEERING
IOR	RADIO-INFOTAINMENT SYSTEM - 3.X LOW HMI, MIDLEVEL CONNECTIVITY 3.X
IOS	RADIO-INFOTAINMENT SYSTEM - 3.X MID/HIGH HMI, ENHANCED CONNECTIVITY, VOICE RECOGNITION, MID SD NAV CAPABLE

RPO	Description
IOT	RADIO-INFOTAINMENT SYSTEM - 3.X MID/HIGH HMI, ENHANCED CONNECTIVITY, VOICE RECOGNITION, PREMIUM SD NAV
J23	ENGINEERING YEAR-2023
J61	BRAKE SYSTEM-POWER, FRT & RR DISC, ABS, 17"
JBP	BRAKE LINING WEAR SY-LIFE SPAN PROGNOSTIC INDICATOR
JHD	BRK APL CTRL FEATURE-HILL DESCENT, GEAR HOLD
JL1	BRK APL CTRL FEATURE-INTEGRATED TRAILER BRAKE
JSE	SALES PACKAGE-ULTIMATE PACKAGE
K05	HEATER ENG-BLOCK
K1O	FILTER MONITOR-ENGINE AIR
K34	CRUISE CONTROL-AUTOMATIC, ELECTRONIC
K40	ENGINE BRAKE-EXHAUST
K47	AIR CLEANER-HIGH CAPACITY
K4B	BATTERY-LN3, FLA, 12V, 70AH, 730 SAE CCA, AUX
K4C	CHARGER-INDUCTIVE PORTABLE WIRELESS DEVICE
KA1	HEATER SEAT FRT-DRVR & PASS
KA6	HEATER SEAT-REAR
KC4	COOLING SYSTEM-ENG OIL
KC5	RECEPTACLE-ELECTRICAL, ACCESSORY
KC9	RECEPTACLE PUBX-ELECTRICAL, 110 VOLT
KHF	GENERATOR-170 AMP AND 220 AMP, DUAL
KI3	STEERING WHEEL HEAT-AUTOMATIC
KI4	RECEPTACLE I/P-ELECTRICAL, 110 VOLT
KNP	COOLING SYSTEM-TRANS, HD
KPA	RECEPTACLE-ELECTRICAL, FRT CONSOLE RR, 12 VOLT
KQV	HEATER-SEAT, VENTED, FRT
KW5	GENERATOR-220 AMP
KW7	GENERATOR-170 AMP
L5P	ENGINE-DIESEL, 8 CYL, 6.6L, DI, V8, TURBO, DURAMAX, GEN 5, VAR. 1
L8T	ENGINE-GAS, 8 CYL, 6.6L, SIDI, VVT, CAST IRON
M1F	POWER TAKE OFF-RR PTO
MAH	MARKETING AREA-US, PUERTO RICO/USVI
MCR	RECEPTACLE-MEMORY CARD
MCZ	PORT, MULTI ELEK DEV-USB
MGM	TRANSMISSION-AUTO 10 SPD, 10L1000, GRX, GEN 1, VAR 1
MGU	TRANSMISSION-AUTO 10 SPD, 10L1000, GRX, GEN 2, VAR 2
MYD	TRANSMISSION-AUTO 6 SPD, HMD, 6L90

RPO	Description
N06	STEERING COLUMN LOCK-ELECTRICAL
N2L	FUEL TANK-REAR TANK 40 GAL (151L)
N2M	FUEL TANK-FRONT TANK 23.5 GAL (89L)
N2N	FUEL TANK-DUAL TANK, FRONT TANK 23.5 GAL (89L) REAR TANK 40 GAL (151L)
N33	STEERING COLUMN-TILT TYPE
N37	STEERING COLUMN-TILT, TELESCOPING
N57	STEERING WHEEL-SYNTHETIC, 4 SPOKE, THIN, ROUND
N79	WHEEL SPARE-18 X 8.0, J, STEEL, DESIGN 2
NB5	EXHAUST SYSTEM-SINGLE
NE1	CERTIFICATION-EMISSION, GEOGRAPHICALLY RESTRICTED REGISTRATION
NK5	STEERING WHEEL-STANDARD
NQF	TRANSFER CASE-ELECTRIC SHIFT CONT, TWO SPEED, ALUM
NQH	TRANSFER CASE-ACTIVE, TWO SPEED, SWITCH ACTIVATED, ALUM
NTB	EMISSION SYSTEM-FEDERAL, TIER 3
NU9	EMISSION SYSTEM-CALIFORNIA, ULEV200
NUK	EMISSION SYSTEM-CALIFORNIA, ULEV250
NUM	EMISSION SYSTEM-CALIFORNIA, LEV3 MDV 10-14K GVW
NV8	STEERING-POWER, MAGNETIC SPEED, VARIABLE ASSIST
NZ4	WHEEL SPARE-17 X 7.5, J, STEEL, DESIGN 2
NZZ	SALES PACKAGE-SKID PLATE, "OFF ROAD" SPORT
P03	COVER, WHEEL-VAR 3
P06	TRIM DISCS-WHEEL
PNF	ACCESSORY-PERFORMANCE AIR FILTER - REPLACEMENT
PTO	ENGINE CONTROL-POWER TAKE OFF (PTO) CONTROLS
PTT	TRAILER TIRE PRESSUR-MANUAL LEARN
PXD	WHEEL-18 X 8.0, J, ALUMINUM, DESIGN 25
PYN	WHEEL-17 X 7.5, J, STEEL, DESIGN 7
PYQ	WHEEL-17 X 7.5, J, ALUMINUM, DESIGN 7
PYT	WHEEL-18 X 8.0, J, STEEL, DESIGN 2
PYU	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 19
PYW	WHEEL-17 X 6.5, J, STEEL, DESIGN 2
PZ8	IMAGE ADJUSTMENT-HITCH VIEW
Q7Q	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 12
Q7R	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 13

RPO	Description
QF6	TIRE ALL-LT275/70R18 E 125/122 S BW AT VAR 1
QF9	TIRE ALL-LT275/65R20 E 126/123 S BW AT VAR 1
QG3	TIRE ALL-LT275/70R18 E 125/122 R BW OOR VAR 1
QHQ	TIRE ALL-LT245/75R17 E 121/118R BW ALS
QK1	GATE TYPE-PUBX END STANDARD
QK2	GATE TYPE-PUBX END ENHANCED
QQO	TIRE ALL-LT235/80R17 E 120/117R BW ALS
QT2	GATE FUNCTION-MANUAL
QT5	GATE FUNCTION-MANUAL ASSIST POWER RELEASE
QT6	GATE FUNCTION-POWER
QXT	TIRE ALL-LT265/70R17 E 121/118 Q BW AT
QZT	TIRE ALL-LT235/80R17 E 120/117R BW AT
R7O	SEAT RR-SPLIT, FOLDING, BASE STORAGE
R88	ACCESSORY-ILLUMINATED EMBLEM - EXTERIOR - DESIGN 2
RDI	ACCESSORY-KEYLESS ENTRY
REM	ACCESSORY TIRE-TIRE ALL - LT275/65R20 E 126/123 S BW AT VAR 1
RIA	ACCESSORY-FLOOR LINER - CONTOURED
RN2	ACCESSORY-ILLUMINATED EMBLEM - EXTERIOR - DESIGN 1
RQA	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 2
RS7	WHEEL-17 X 6.5, J, ALUMINUM, DESIGN 1
RSR	OCCUPANT DETECT SYS-REAR SEAT, DOOR ACTIVATED
RTJ	WHEEL-20 X 8.5, J, ALUMINUM, DESIGN 4
RVG	ACCESSORY-ADAPTER - TRAILER HARNESS
RVK	ACCESSORY-AIRBOX
RVQ	ACCESSORY-ASSIST STEPS - TUBULAR - OVAL - BLACK
RVS	ACCESSORY-ASSIST STEPS - TUBULAR - ROUND - BLACK
RW9	ACCESSORY-BED STORAGE BOX - SIDE FULL LENGTH - COMPOSITE
RWL	CHASSIS DRIVE LINE-REAR WHEEL DRIVE (RWD)
RWR	ACCESSORY-CAMERA - REAR VISION
RWS	ACCESSORY-FLOOR MATS - CARPET
RXC	ACCESSORY-AIR, POLLUTANT, ODOR, FINE DUST, ALLERGEN
RXJ	ACCESSORY-CENTER CAP - WHEEL - DESIGN 2
RXQ	ACCESSORY-CONVENIENCE NET - BED MOUNTED
RYT	ACCESSORY-FIRST AID KIT

RPO	Description
S08	ACCESSORY-HIGHWAY SAFETY KIT
S0D	ACCESSORY-HOOD INDUCTION VENT ASSEMBLY
S0M	ACCESSORY-ILLUMINATED DOOR SILLS
S0P	ACCESSORY-INSERT - FLOOR CONSOLE
S0T	ACCESSORY-INTERIOR TRIM KIT - ALTERNATE FINISH 1
S1O	ACCESSORY-CONTAINER - LOCKABLE STORAGE - INTERIOR
S1V	ACCESSORY-HEADPHONES - RSE
S3I	ACCESSORY-LAMPS - PERIMETER ILLUMINATION
S41	ACCESSORY-LINER - WHEEL HOUSE
S47	ACCESSORY-LUG NUTS
S54	ACCESSORY-NAVIGATION MAP UPDATES
S6L	ACCESSORY-PROTECTOR - ROCKER PANEL
S6N	ACCESSORY-RECEIVER COVER - TRAILER HITCH
S6P	ACCESSORY-REMOTE START KIT
SAF	LOCK-SPARE TIRE, HOIST SHAFT
SAX	ACCESSORY-SPEAKER KIT - LEVEL 1
SBZ	ACCESSORY-SPORT PEDAL KIT
SD5	ACCESSORY-TIRE PRESSURE MONITOR
SDE	ACCESSORY-TRAILER HITCH - REMOVABLE
SDI	ACCESSORY-TRIANGLE - REFLECTIVE
SF6	ACCESSORY-WHEEL FLARES - ALTERNATE DESIGN - PAINTED
SFE	ACCESSORY-WHEEL LOCKS
SFJ	ACCESSORY-WINDOW SHADES - REFLECTIVE
SFZ	ACCESSORY-EMBLEM - EXTERIOR - DESIGN 1
SHH	ACCESSORY-WHEEL - 20 X 8.5 - J - ALUMINUM - DESIGN 1
SHL	ACCESSORY-WHEEL - 20 X 8.5 - J - ALUMINUM - DESIGN 2
SIE	ACCESSORY-PUBX TIERED STORAGE
SIL	ACCESSORY-RSE - PORTABLE MEDIA CONNECTIVITY PKG - W/INTEGRATED POWER
SJ9	ACCESSORY-GRILLE / GRILLE INSERTS - ALTERNATE FINISH 1
SKP	WHEEL SPARE-17 X 6.5, J, STEEL, DESIGN 1
SKW	ACCESSORY-WHEEL - 20 X 8.5 - J - ALUMINUM - DESIGN 6
SKX	ACCESSORY-WHEEL - 20 X 8.5 - J - ALUMINUM - DESIGN 7
SL7	ACCESSORY-PUBX LADDER / UTILITY RACK STANCHIONS
SNO	ACCESSORY-HITCH COMPLETION PKG - GOOSENECK

RPO	Description
SNR	SEAT RR-SPLIT, FOLDING, DELUXE STORAGE
SPY	ACCESSORY-LUG NUTS - ALT FINISH
SPZ	ACCESSORY-WHEEL LOCKS - ALT FINISH
SQ9	ACCESSORY-WHEEL - 20 X 8.5 - J - ALUMINUM - DESIGN 8
SR3	ACCESSORY-RSE - DUAL HEADREST DISPLAY W/WIRELESS CONNECTIVITY & DVD
SRW	CHASSIS-SINGLE REAR WHEEL, RIDE & HANDLING
SUR	ACCESSORY-TRAILER TIRE PRESSURE MONITOR
T3U	LAMP FRT FOG-FRT FOG
T4L	HEADLAMPS-LED
TDM	MODE DRIVER SETTINGS-TEEN DRIVER, INFOTAINMENT
THS	TRAILERING ASSIST-GUIDELINES
TQ5	HEADLAMP HIGH BEAM-AUTO CONTROL
TRO	ACCESSORY-CAMERA PKG - TRAILERING AUX MOUNTED
TUF	ORNAMENTATION-EMBLEM, "TEXAS EDITION"
U01	LAMP-FIVE, ROOF MARKER, TRUCK
U12	LAMP-EXTR, OSRV MIRROR, TASK
U1D	INDICATOR-TRAILER INFORMATION
U2J	DIGITAL AUDIO SYSTEM-S-BAND - NONE
U2K	DIGITAL AUDIO SYSTEM-S-BAND
U73	ANTENNA-FIXED, RADIO
U95	SPEAKER SYSTEM-2, BASE
UD5	PARK ASSIST-FRONT AND REAR
UD7	PARK ASSIST-REAR
UDC	DISPLAY INSTRUMENT-DRIVER INFO ENHANCED (ONE COLOR GRAPHIC)
UDD	DISPLAY INSTRUMENT-DRIVER INFO ENHANCED (MULTI COLOR STANDARD GRAPHIC)
UDU	PROVISIONS-REAR CAMERA PREP
UE0	COMMUNICATION SYSTEM-VEHICLE - NONE
UE1	COMMUNICATION SYSTEM-VEHICLE, ONSTAR
UE4	SENSOR INDICATOR-FOLLOWING DISTANCE
UEU	SENSOR INDICATOR-FORWARD COLLISION ALERT
UF2	LAMP-CARGO
UF3	SWITCH-HIGH IDLE
UFG	REAR CROSS TRAFFIC-ALERT
UFL	LANE ACTIVE SAFETY-DEPARTURE WARNING
UG1	OPENER-GARAGE DOOR, UNIVERSAL
UGA	HOOK-TOW, RED

RPO	Description
UHS	DISPLAY INSTRUMENT-DRIVER INFO ENHANCED (MULTI COLOR ENHANCED GRAPHIC)
UHY	COLL IMMINENT BRK-LOW SPEED, VEH FWD MOVEMENT, BRAKE PREFILL, INTEGRATED BRAKE ASSIST
UIJ	INFOTAINMENT DISPLAY-NORMALLY BLACK COLOR (TFT), 8", WVGA 800X480P
UIK	INFOTAINMENT DISPLAY-NORMALLY BLACK COLOR (TFT), 8", WXGA 1280X768P
UIR	INFOTAINMENT DISPLAY-NORMALLY BLACK COLOR (TFT), 7", WVGA 800X480P
UJM	TIRE PRESS INDICATOR-MANUAL LEARN
UK3	CONTROL-STEERING WHEEL, ACCESSORY
UKC	SIDE ACTIVE SAFETY-OBSTACLE DETECTION ENHANCED
UMN	SPEEDOMETER-INST, MILES & KILO, MILES ODOMETER
UQA	SPEAKER SYSTEM-PREMIUM AUDIO, BRANDED AMPLIFIER
UQF	SPEAKER SYSTEM-STANDARD AUDIO
URC	SWITCH-FLEXRIDE MODE SYSTEM
USS	RECEPTACLE-USB CHARGE PORT
UTJ	THEFT DETERENT-ELECTRICAL, UNAUTHORIZED ENTRY
UV6	HEAD UP DISPLAY-WINDSHIELD
UVB	VISION-REAR VIEW, MONO, HD DIGITAL
UVC	VISION-REAR VIEW, MONO, ANALOG
UVD	STEERING WHEEL HEAT-MANUAL
UVI	VISION-270 & REAR TRAILER VIEW, MONO, HD DIGITAL
UVN	VISION AUXILIARY-CARGO BED
UVO	VISION AUXILIARY-CARGO BED BASE
UVS	VISION-360 & TRAILER VIEW, MONO, HD DIGITAL
UY2	WIRING PROVISIONS-CAMPER & 5TH WHEEL TRAILER
V46	BUMPER FRT-CHROME
V76	HOOK-TOW
V8D	VEHICLE STATEMENT-VEHICLE LABEL CONTENT - U.S. FMVSS
VAV	ACCESSORY-FLOOR MATS - ALL WEATHER
VB5	BUMPER FRT-COLOR
VBJ	ACCESSORY-UNDERSEAT STORAGE
VBR	ACCESSORY-PUBX RUBBER MAT
VGC	PROTECTOR-FILM, PAINT ETCH PREVENTIVE
VJH	BUMPER RR-CHROME
VK3	LICENSE PLATE FRONT-FRT MOUNTING PKG
VKU	ACCESSORY-MIRROR CAPS - CHROME
VKW	ACCESSORY-ORGANIZER - FRONT CONSOLE
VKY	ACCESSORY-DOOR HANDLES - ALTERNATE FINISH - CHROME
VLQ	HOOK-TOW, CHROME
VMK	ACCESSORY-CARGO MANAGEMENT SYSTEM RAILS
VOZ	ACCESSORY-TONNEAU - RR COMPT - HARD FOLDING - ALT DESIGN
VPB	ACCESSORY-TONNEAU - RR COMPT - VINYL W/ INTEGRAL CROSSBOW SUPPORTS
VQK	ACCESSORY-SPLASH GUARDS - CUSTOM MOLDED
VQO	ACCESSORY-ASSIST STEPS - BLACK
VQY	ACCESSORY-TOW HOOKS - CHROME
VQZ	ACCESSORY-EXHAUST TIP - DESIGN 1
VST	ACCESSORY-SILL PLATES - ALTERNATE DESIGN 1
VSX	LABEL-TOWING
VT5	BUMPER RR-COLOR KEYED
VT7	OWNERS MANUAL-ENGLISH LANGUAGE
VTA	ACCESSORY-EXHAUST TIP - DESIGN 2
VTP	ACCESSORY-ASSIST STEPS - COMMERCIAL
VUK	ACCESSORY-TAILGATE LINER - PUBX
VV4	COMMUNICATION EQUIP-MOBILE INTERNET CONNECTIVITY
VW9	ACCESSORY-CENTER CAP - WHEEL - DESIGN 3
VXH	ACCESSORY-ASSIST STEPS - TUBULAR - CHROME - OVAL
VXJ	ACCESSORY-ASSIST STEPS - TUBULAR - CHROME - ROUND
VXT	VEHICLE TYPE-INCOMPLETE
VXW	ACCESSORY-ASSIST STEPS - MOLDED
VYU	PROVISIONS-SNOW PLOW PREP
VZX	ACCESSORY-PUBX BEDLINER
W2D	ACCESSORY-CARGO NET
WLD	WINDOW CONTROL-REMOTE EXPRESS DOWN, ALL WINDOWS
WMI	SHUTTERS-FRONT GRILLE, ACTIVE, UPR AND LWR
WMX	VIN MODEL YEAR-2023
WPC	SALES PACKAGE-COMFORT AND CONVENIENCE
WPF	SALES PACKAGE-PREFERRED
X31	APPEARANCE PACKAGE-GMC "X31 OFF ROAD"
YF5	CERTIFICATION-EMISSION, CALIFORNIA
Z6A	PROVISIONS-SPECIAL EQUIPMENT, 5TH WHEEL/ GOOSENECK TRAILER HITCH PREP PACKAGE

RPO	Description
Z71	CHASSIS PACKAGE-"OFF ROAD"
Z82	TRAILER PROVISIONS-SPECIAL EQUIPMENT, H.D.
Z85	CHASSIS PACKAGE-INCREASED CAPACITY
Z88	MARKET BRAND-GMC
ZHQ	TIRE SPARE-LT245/75R17 E 121/118 R BW ALS
ZL3	SALES PACKAGE-CONVENIENCE
ZL6	SALES PACKAGE-TRAILER INTEGRATION
ZLQ	SALES PACKAGE-LS FLEET
ZQO	TIRE SPARE-LT235/80R17 E 120/117R BW HWY
ZW9	BODY EQUIPMENT-BASE BODY OR CHASSIS
ZXT	TIRE SPARE-LT265/70R17/E BW TL
ZYG	TIRE SPARE-LT275/70R18 E 125/122 S BW AT VAR 1
ZZT	TIRE SPARE-LT235/80R17 E 120/117 R BW AT

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Section 2

Body Systems

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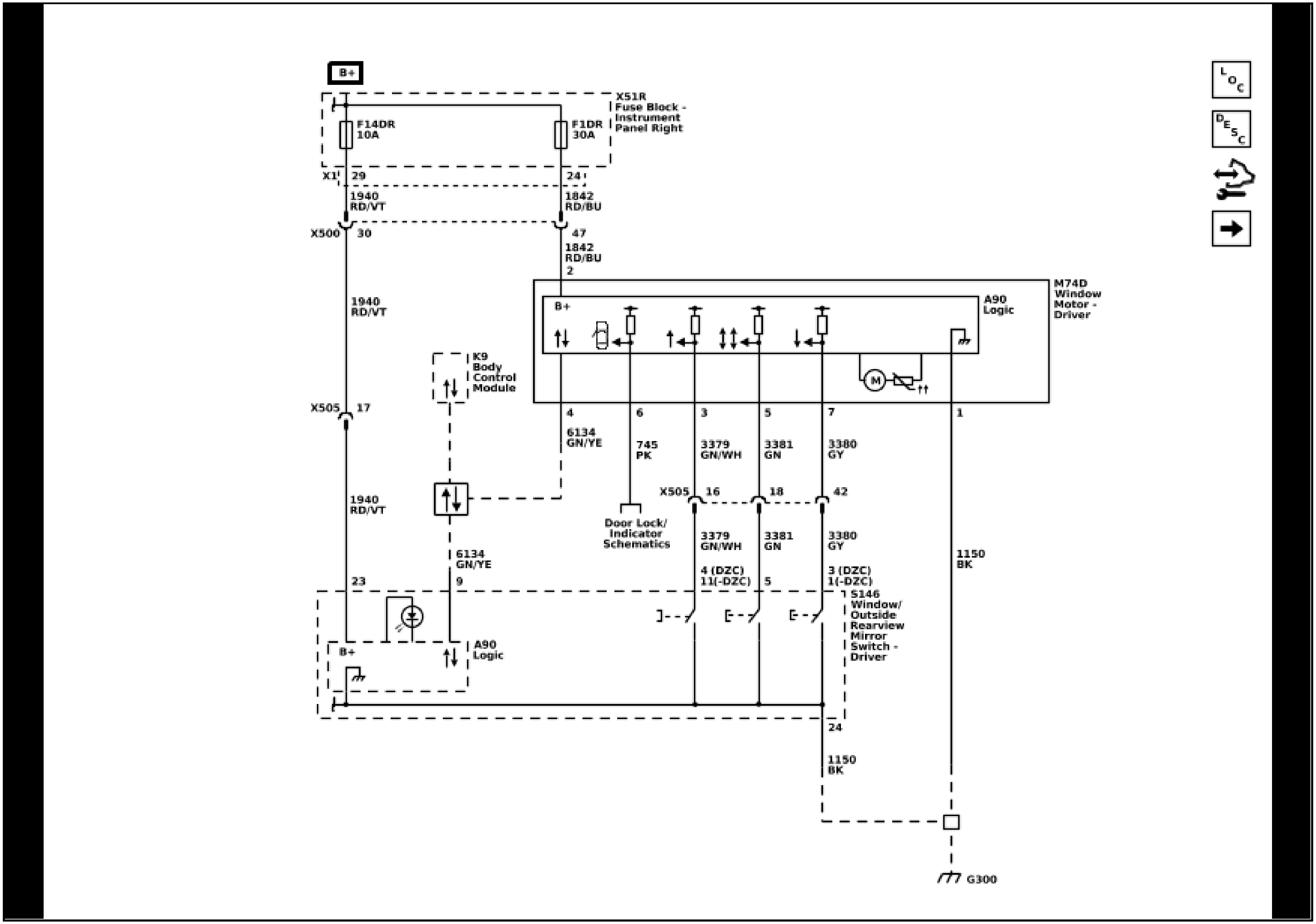
Fixed and Moveable Windows

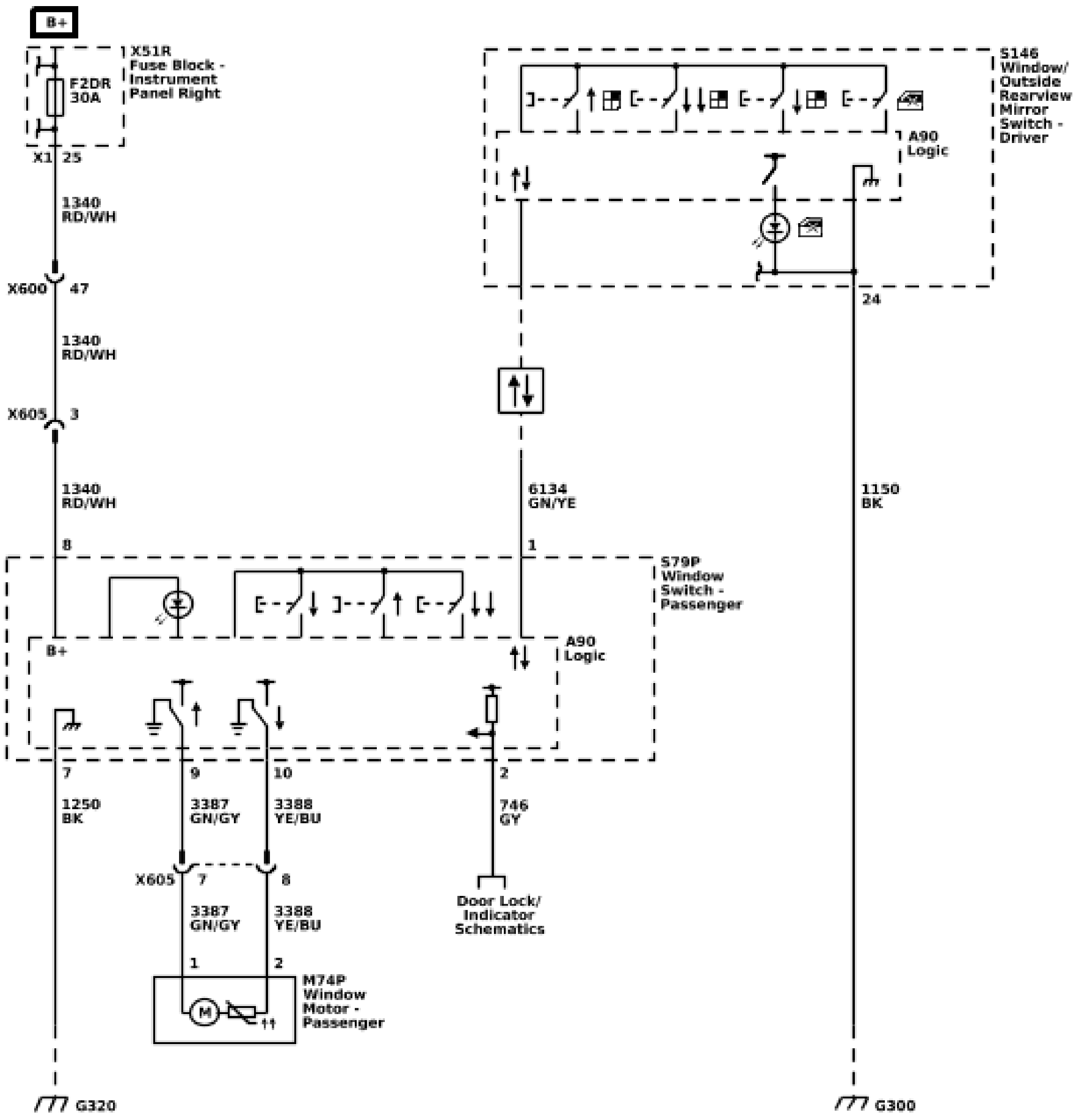
Schematic and Routing Diagrams

Moveable Window Schematics (Driver Window (AXG))


B+
X51R
Fuse Block -
Instrument
Panel Right
F14DR
10A
F1DR
30A
X1
29
24
1940
RD/VT
1842
RD/BU
X500
30
47
2
M74D
Window
Motor -
Driver
A90
Logic
B+
M
K9
Body
Control
Module
X505
17
4
6
3
5
7
1
6134
GN/YE
745
PK
3379
GN/WH
3381
GN
3380
GY
X505
16
18
42
Door Lock/
Indicator
Schematics
1150
BK
23
9
4 (DZC)
11(-DZC)
5
3 (DZC)
1(-DZC)
S146
Window/
Outside
Rearview
Mirror
Switch -
Driver
A90
Logic
B+
24
1150
BK
G300

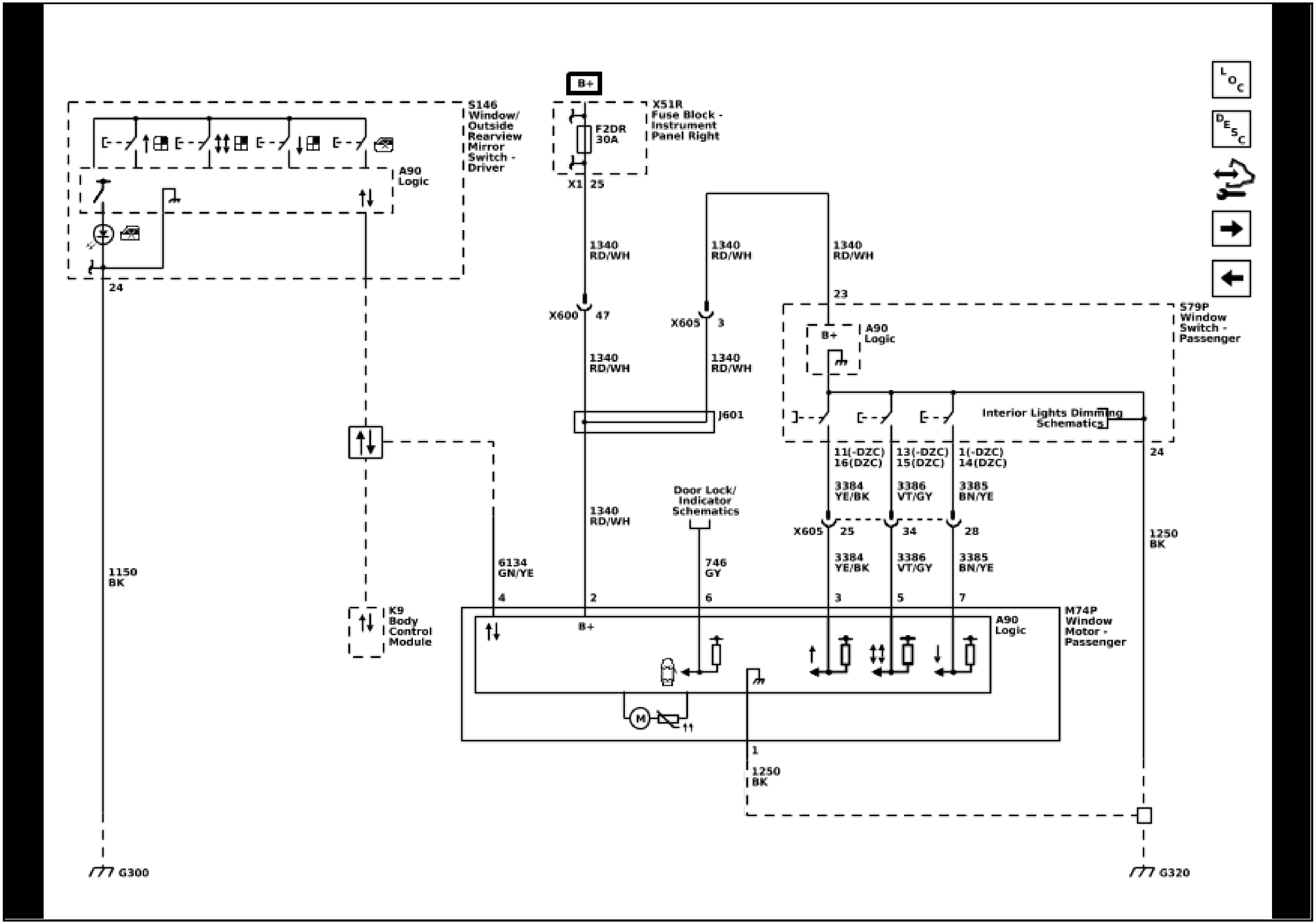
5995340

Moveable Window Schematics (Passenger Window (AED))


B+
X51R
Fuse Block -
Instrument
Panel Right
F2DR
30A
X1 25
1340
RD/WH
X600 47
1340
RD/WH
X605 3
1340
RD/WH
8
S146
Window/
Outside
Rearview
Mirror
Switch -
Driver
A90
Logic
24
6134
GN/YE
1
1150
BK
S79P
Window
Switch -
Passenger
A90
Logic
B+
7
9
10
2
1250
BK
3387
GN/GY
3388
YE/BU
746
GY
X605 7
8
3387
GN/GY
3388
YE/BU
Door Lock/
Indicator
Schematics
1
2
M74P
Window
Motor -
Passenger
M
G320
G300

5995341

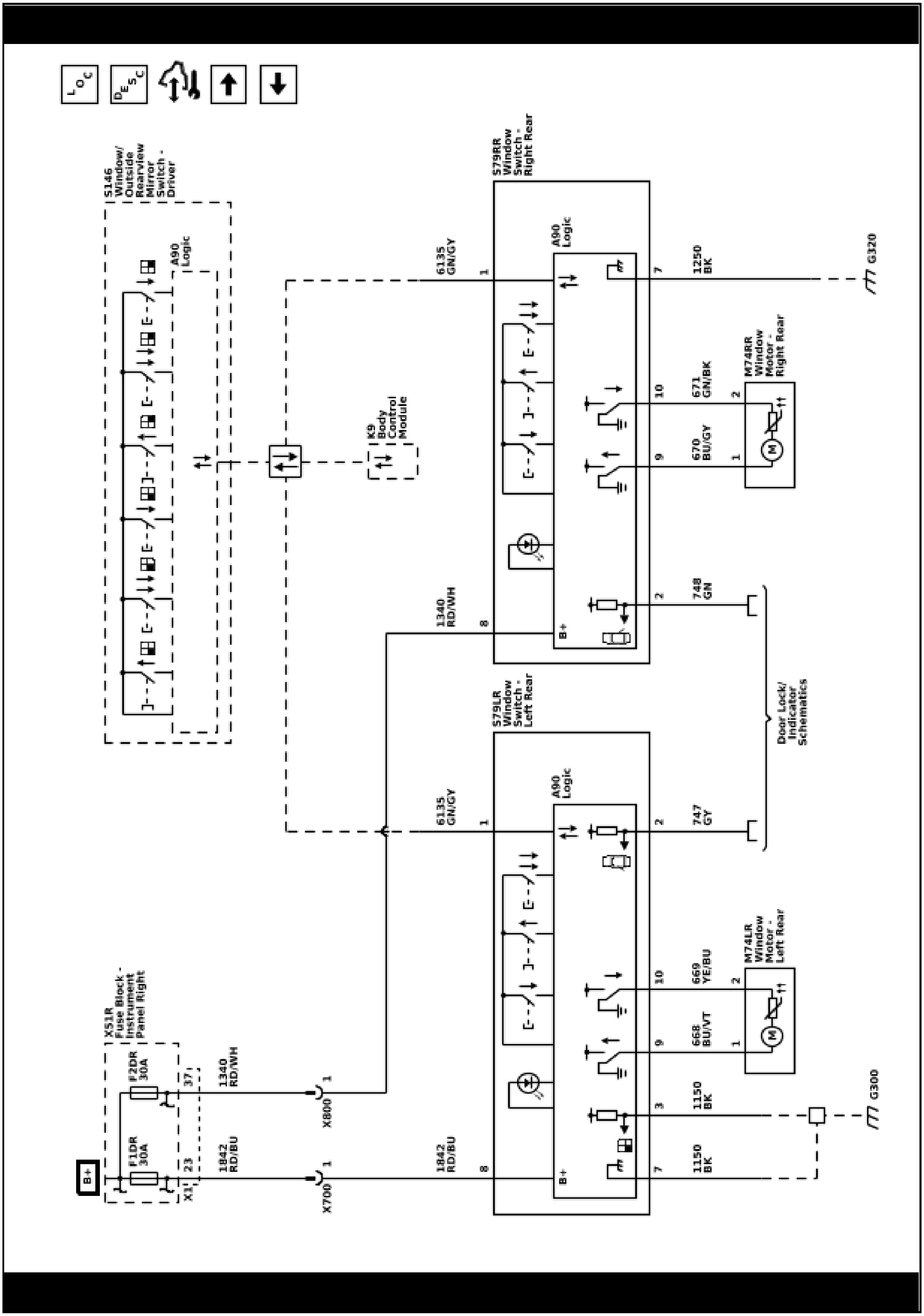
Moveable Window Schematics (Passenger Window (AEF))



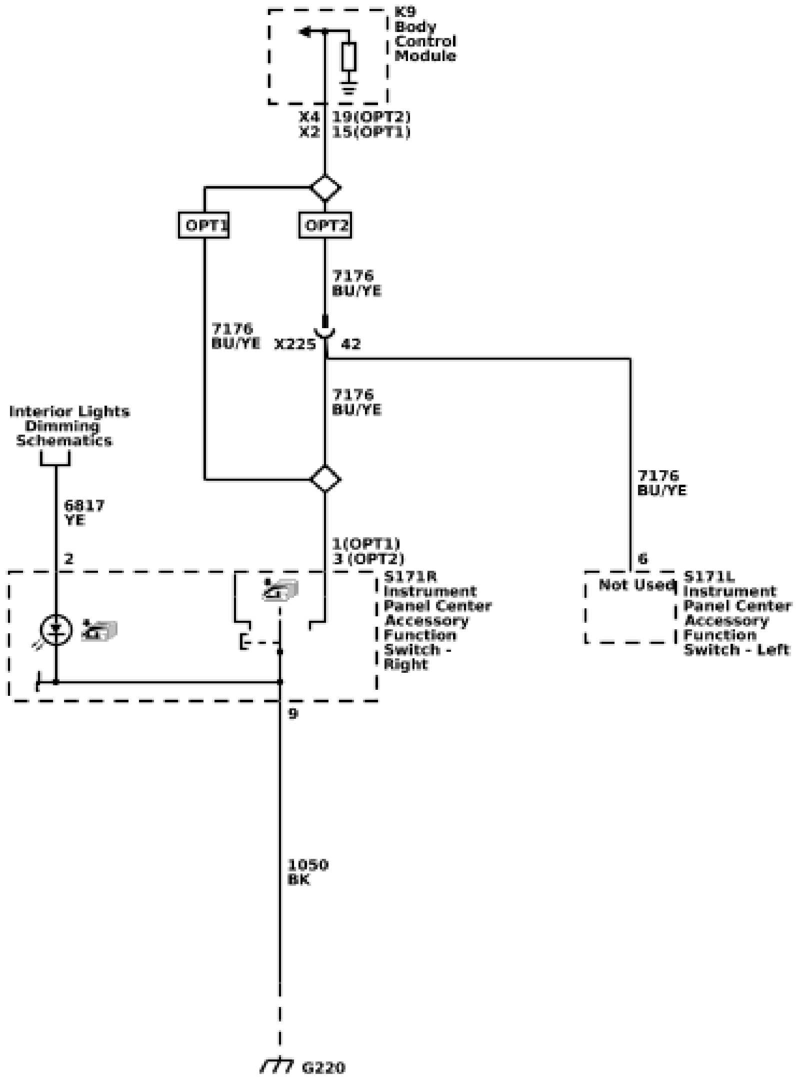
S146 Window/ Outside Rearview Mirror Switch - Driver
A90 Logic
24
1150 BK
G300
K9 Body Control Module
B+
X51R Fuse Block - Instrument Panel Right
F2DR 30A
X1 25
1340 RD/WH
X600 47
1340 RD/WH
X605 3
1340 RD/WH
J601
1340 RD/WH
1340 RD/WH
1340 RD/WH
23
S79P Window Switch - Passenger
A90 Logic
B+
Interior Lights Dimming Schematics
11(-DZC) 16(DZC)
13(-DZC) 15(DZC)
1(-DZC) 14(DZC)
3384 YE/BK
3386 VT/GY
3385 BN/YE
X605 25
34
28
3384 YE/BK
3386 VT/GY
3385 BN/YE
24
1250 BK
Door Lock/ Indicator Schematics
746 GY
6134 GN/YE
4
2
6
3
5
7
B+
A90 Logic
M74P Window Motor - Passenger
M
1
1250 BK
G320

5995342

Moveable Window Schematics (Rear Windows (AEQ))

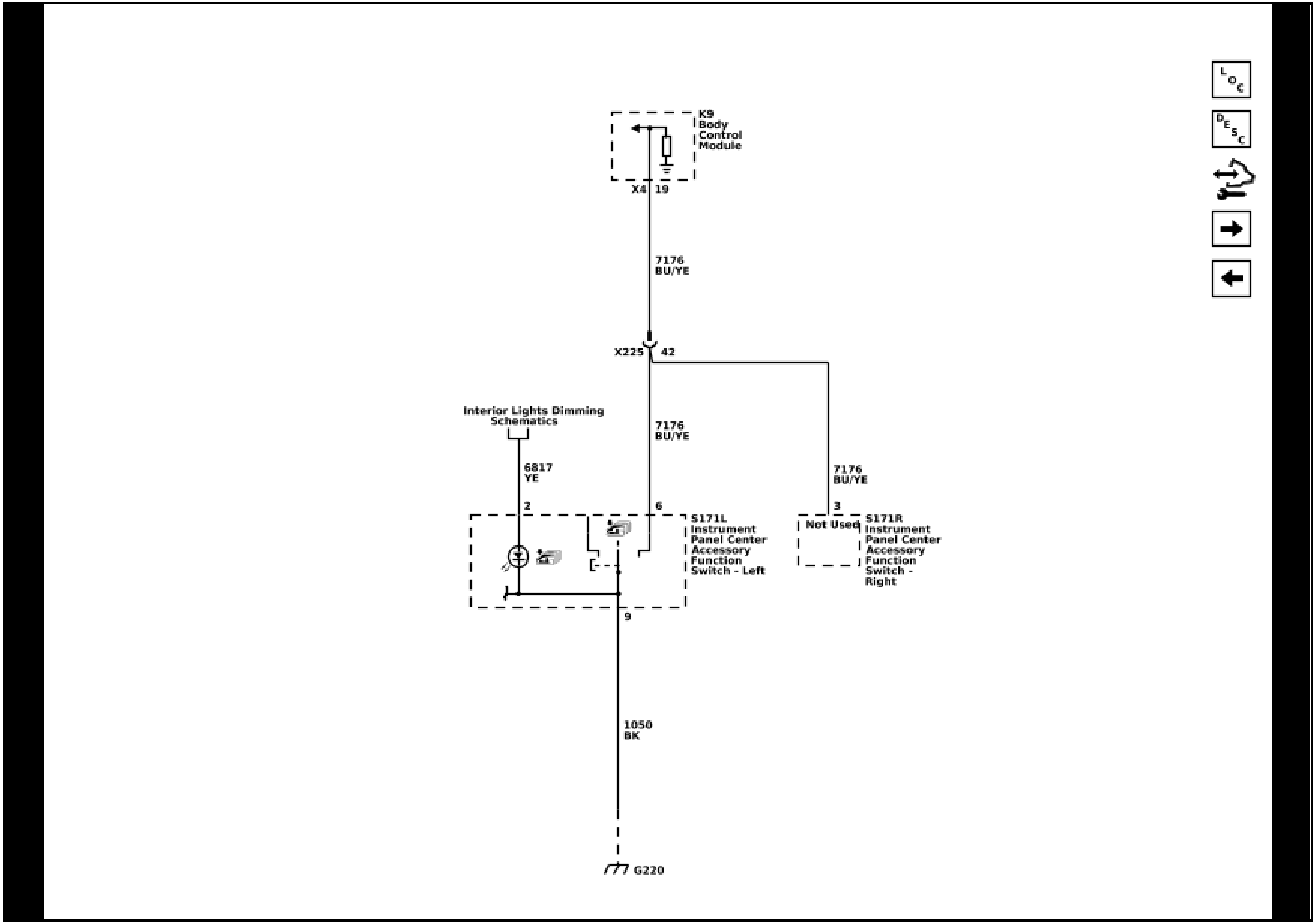

5995343
B+
X51R Fuse Block - Instrument Panel Right
F1DR 30A
F2DR 30A
X1
23
37
1842 RD/BU
1340 RD/WH
X700 1
X800 1
S146 Window/ Outside Rearview Mirror Switch - Driver
A90 Logic
K9 Body Control Module
6135 GN/GY
S79LR Window Switch - Left Rear
S79RR Window Switch - Right Rear
B+
1
2
3
7
8
9
10
747 GY
748 GN
1150 BK
1250 BK
668 BU/VT
669 YE/BU
670 BU/GY
671 GN/BK
M74LR Window Motor - Left Rear
M74RR Window Motor - Right Rear
M
Door Lock/ Indicator Schematics
G300
G320

Moveable Window Schematics (Global Window Express Down Switch (WLD) (In Right IP Accessory Function Switch))


K9
Body
Control
Module
X4 19(OPT2)
X2 15(OPT1)
OPT1
OPT2
7176
BU/YE
X225
42
7176
BU/YE
7176
BU/YE
7176
BU/YE
Interior Lights
Dimming
Schematics
6817
YE
2
1(OPT1)
3 (OPT2)
S171R
Instrument
Panel Center
Accessory
Function
Switch -
Right
6
Not Used
S171L
Instrument
Panel Center
Accessory
Function
Switch - Left
9
1050
BK
G220

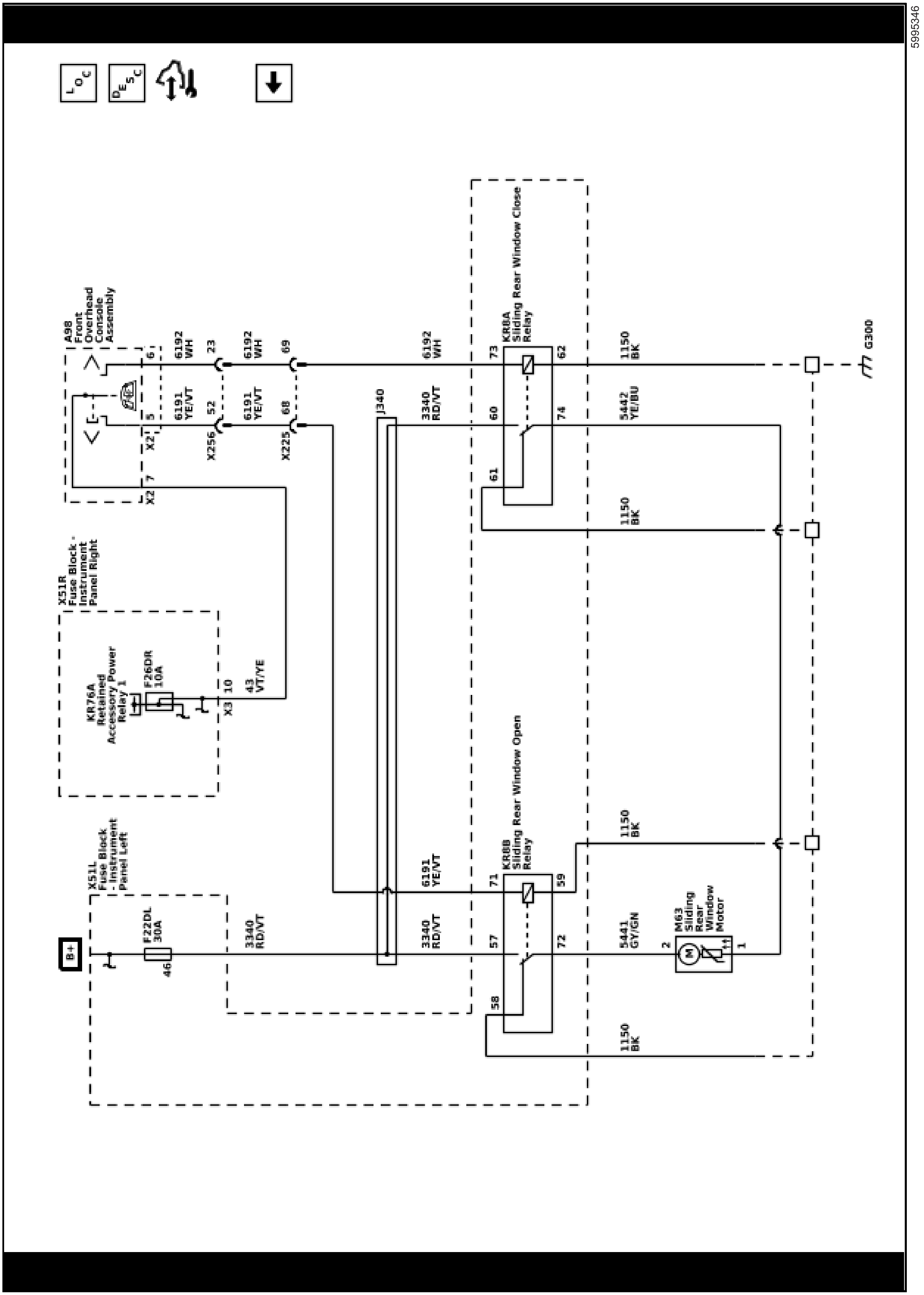
5995344

Moveable Window Schematics (Global Window Express Down Switch (WLD) (In Left IP Accessory Function Switch))

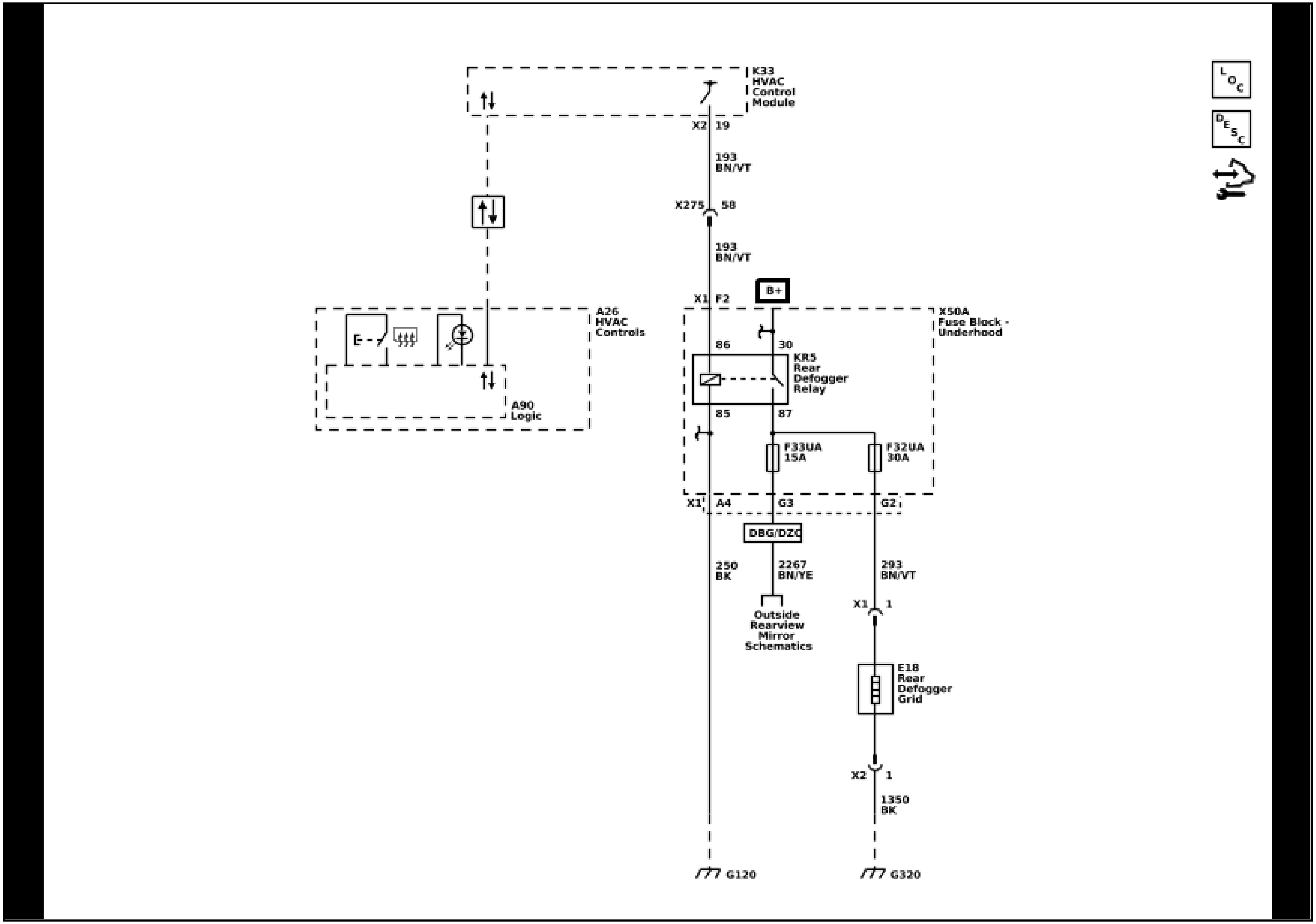

K9
Body
Control
Module
X4 19
7176
BU/YE
X225 42
Interior Lights Dimming
Schematics
6817
YE
2
7176
BU/YE
6
7176
BU/YE
3
Not Used
S171L
Instrument
Panel Center
Accessory
Function
Switch - Left
S171R
Instrument
Panel Center
Accessory
Function
Switch -
Right
9
1050
BK
G220

5995345

Moveable Window Schematics (Rear Sliding Window (A48))


5995346
B+
X51L Fuse Block - Instrument Panel Left
F22DL 30A
46
3340 RD/VT
X51R Fuse Block - Instrument Panel Right
KR76A Retained Accessory Power Relay 1
F26DR 10A
X3 10
43 VT/YE
A98 Front Overhead Console Assembly
X2 7
X2 5
6
6192 WH
6191 YE/VT
23
52
X256
69
68
X225
J340
3340 RD/VT
6191 YE/VT
6192 WH
KR8A Sliding Rear Window Close Relay
73
60
61
62
74
KR8B Sliding Rear Window Open Relay
71
57
58
59
72
1150 BK
5442 YE/BU
5441 GY/GN
M63 Sliding Rear Window Motor
M
2
1
G300

Defogger Schematics (Defogger)


K33 HVAC Control Module
X2 19
193 BN/VT
X275 58
193 BN/VT
X1 F2
B+
X50A Fuse Block - Underhood
86
30
KR5 Rear Defogger Relay
85
87
F33UA 15A
F32UA 30A
X1 A4
G3
G2
DBG/DZC
250 BK
2267 BN/YE
293 BN/VT
Outside Rearview Mirror Schematics
X1 1
E18 Rear Defogger Grid
X2 1
1350 BK
G120
G320
A26 HVAC Controls
A90 Logic
5995347

Description and Operation

Power Windows Description and Operation

Power Windows System Components

The power window system consists of the following components:

- Driver window/outside rearview mirror switch
- Passenger window switch
- Left rear window switch
- Right rear window switch
- Global express down window switch
- Window motors in each of the doors
- 30A Fuse
- Body control module (BCM)

Power Window System

This vehicle may be equipped with the following power window configurations:

- Driver door with express up and express down window motor
- Passenger door with express up and express down window motor
- Passenger door with express down only window motor
- Left rear door with express down only window motor
- Right rear door with express down only window motor

Driver and Passenger Express Up and Express Down Power Window Motors

The driver and passenger doors contains a window motor is smart motor that will detect excessive resistance while performing the express up function and automatically reverse direction to prevent injury to any occupants that may become trapped between the closing window and the door frame. The automatic reverse safety feature can be overridden by pulling and holding the window switch.

The logic circuit within the window motor monitors the up, down and express signal circuits which are normally equal to B+ voltage. When a switch is used on the window switch, the contacts close causing a voltage drop within the appropriate signal circuit. The window motor will detect the voltage drop and will command the window to move in the direction requested.

The driver window/outside rearview mirror switch communicates to the BCM by a serial data circuit. When the driver wishes to control the passenger window, the driver will use the appropriate switch on the driver window/outside rearview mirror switch. When this switch is used, a serial data message is sent to the BCM requesting the passenger window motor command, the BCM will then send a serial data message to the passenger window motor which will then move in the direction requested.

Passenger, Left Rear and Right Rear Express Down Only Window Motors

For the passenger, right rear and left rear doors, when their window switch is pressed in the down position, battery positive voltage is applied to their respective window motor control circuit and ground to the other window motor control circuit causing that window to open. When the individual window switch is pulled in the up position, voltage and ground is applied to the window motor in the opposite direction causing that window to close. The return path to ground is supplied through the inactive control circuit being normally grounded through the window switch.

The passenger and rear window switches communicates to the BCM by a serial data circuit. When the driver wishes to control the passenger, left rear or right rear window, the driver will use the appropriate switch on the driver window/outside rearview mirror switch. When this switch is used, a serial data message is sent to the BCM requesting a window motor command, the BCM will then send a serial data message to the appropriate door window switch which will then command that window to move in the direction requested.

Global Window Express Down Switch

The global express down switch (part of the instrument panel multifunction switch) may be used to commanded all windows to perform the express down function

Lockout Switch Feature

The driver window/outside rearview mirror switch contains a window lockout switch, when the driver presses the window lockout switch, a serial data message is sent to the BCM which will send a disable command to the rear window switches, deactivating them. The rear windows will still function normally from the switches on the driver window/outside rearview mirror switch.

Power Sliding Rear Window

NOTE: Power window lockout switch disables left rear and right rear passenger window switches only and has no effect on the operation of the power sliding window switch.

The power sliding rear window motor is controlled from the rear window OPEN/CLOSE switch through OPEN and CLOSE relays. The OPEN/CLOSE switch is supplied voltage from the body control module accessory voltage output circuit. When the switch is pressed in the OPEN or CLOSED position the OPEN or CLOSED relay coil will be supplied accessory voltage and energized through the appropriate relay control circuit. While the OPEN and CLOSE relays are in a de-energized state both motor control circuits will be closed to ground. When one of the relays is energized its motor control circuit will be closed to the battery voltage supply circuit and the other motor control circuit will remain grounded through the de-energized relay.

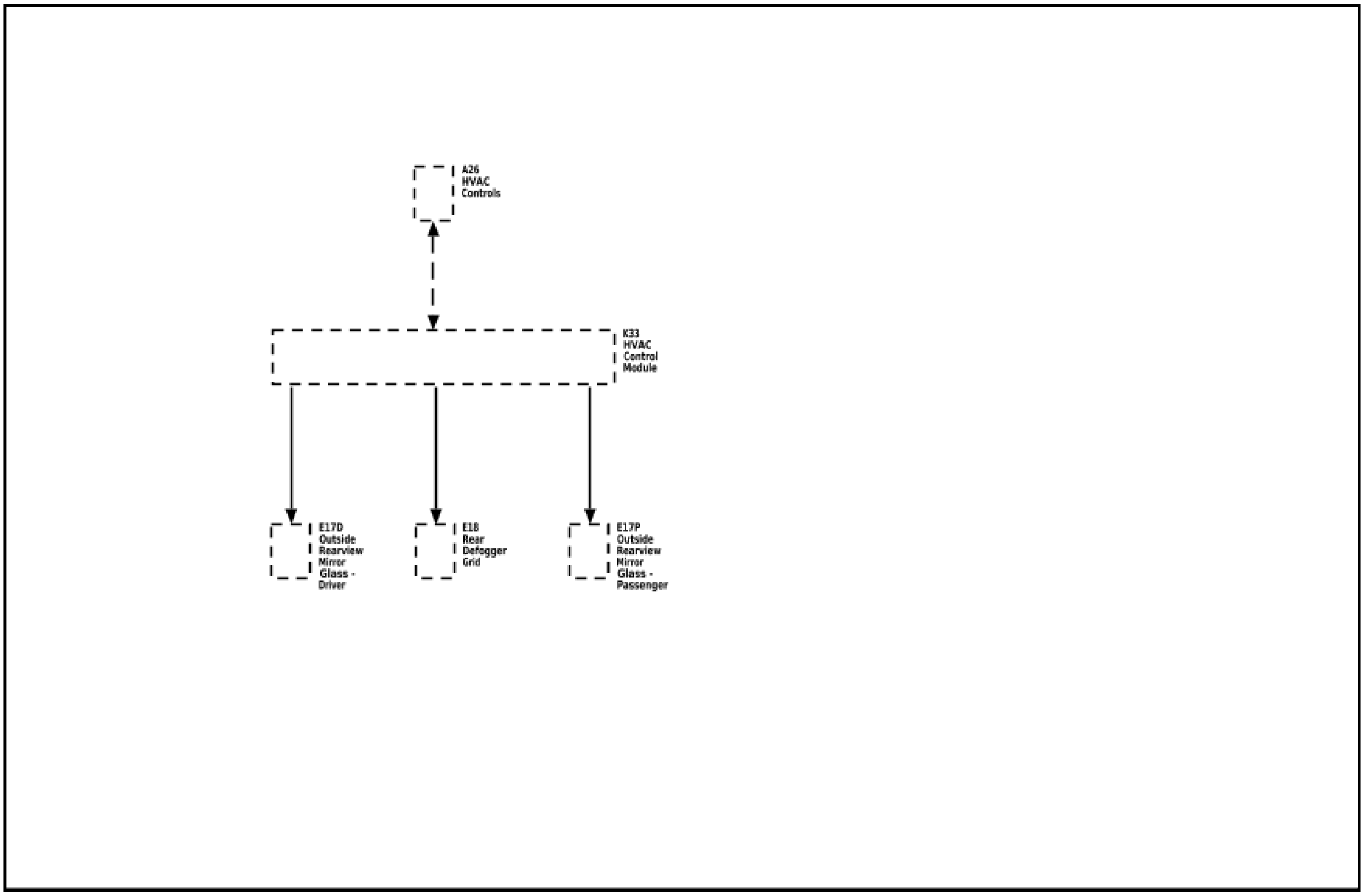
Rear Window Defogger Description and Operation

Rear Window Defogger System Components

The rear window defogger system consists of the following components:

- HVAC Control Module
- HVAC Controls
- Rear Defogger Relay
- Rear Defogger Grid
- Driver Outside Rearview Mirror
- Passenger Outside Rearview Mirror
- 40A Fuse

A26-K33-X50A Defogger Block Diagram



3511665

Rear Window Defogger Operation

The rear defog control system utilizes a single zone backlight design, driven with a single relay configuration. Additionally, up to two outside rear view mirrors can be heated if required. A switch for the customer to control the system is provided within the HVAC controls. Also included in the HVAC controls is an indicator to inform the customer with the current state of the system. The system is only operational when engine is running or during remote start.

Pressing the heated rear window switch causes the HVAC controls to send a serial data message to the HVAC control module requesting rear window defog operation. The HVAC control module upon receipt of the serial data message will provide voltage to the coil side of the rear defogger relay, this will energize the relay causing the relay switch contacts to close allowing B+ voltage to flow through the rear defogger grid control circuit to the rear defogger grid.

When the rear heated rear window switch is pressed and the engine is running, the rear window defogger grid will activate and will turn off automatically depending upon the vehicle speed (refer to owner’s manual for rear window defogger operation cycles)

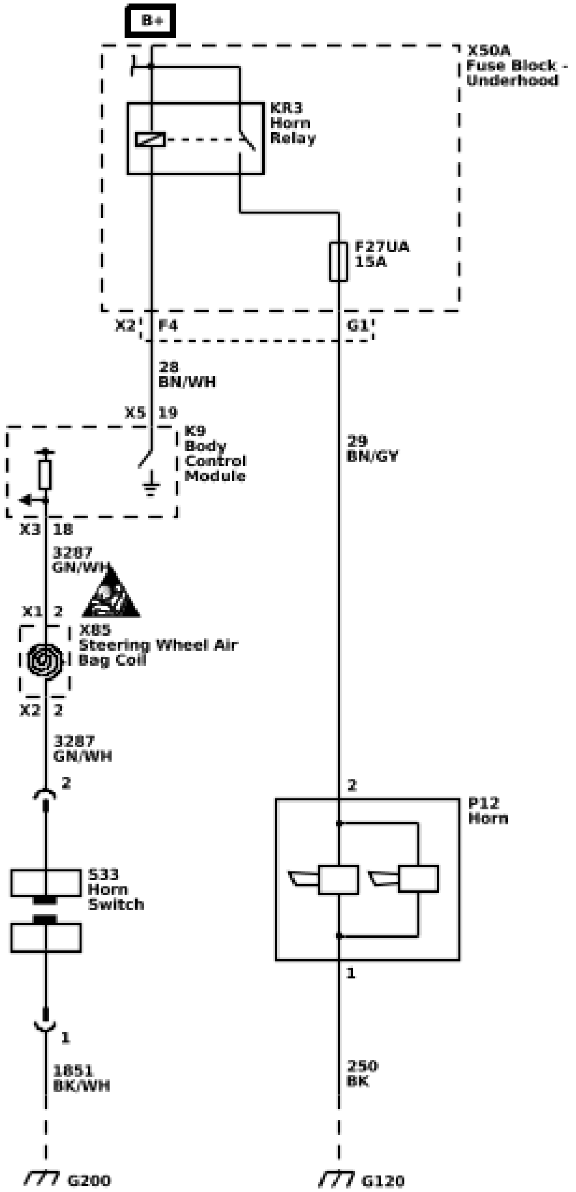
Heated Mirrors

The heated mirrors are also controlled through the rear defogger relay. Whenever the rear window defogger is turned on battery voltage is supplied to the mirror heater elements through the left and right mirror heater element control circuits.

Horns and Pedestrian Alerts

Schematic and Routing Diagrams

Horn Schematics (Horn)


B+
X50A
Fuse Block -
Underhood
KR3
Horn
Relay
F27UA
15A
X2
F4
G1
28
BN/WH
X5
19
K9
Body
Control
Module
X3
18
3287
GN/WH
X1
2
X85
Steering Wheel Air
Bag Coil
X2
2
3287
GN/WH
2
S33
Horn
Switch
1
1851
BK/WH
G200
29
BN/GY
2
P12
Horn
1
250
BK
G120

5995348

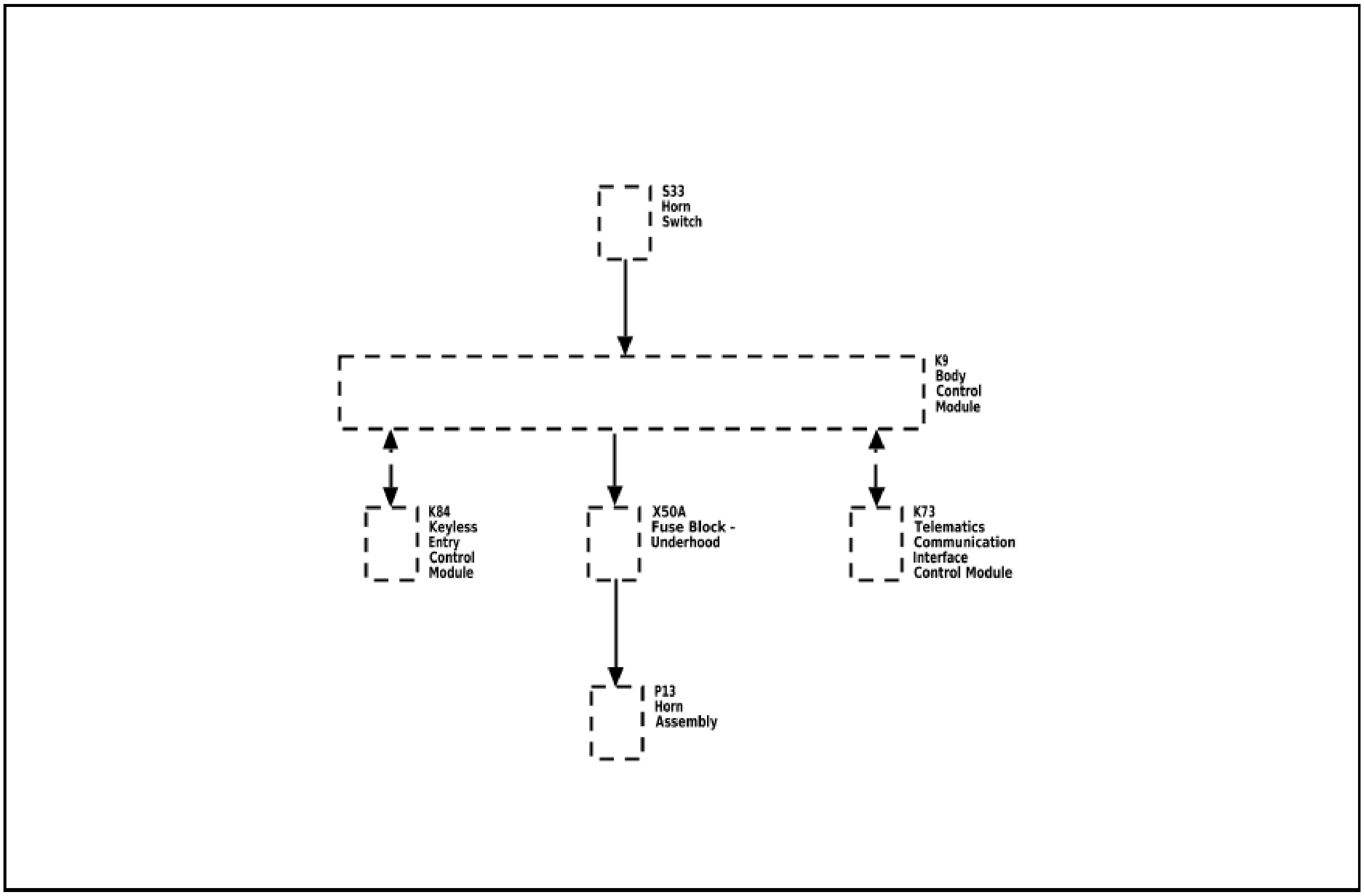
Description and Operation

Horns System Description and Operation

System Description

The horn system consists of the following components:

- HORN fuse
- Underhood fuse block (Contains PCB horn relay)
- Horn switch
- Horn assembly
- Body control module (BCM)



3270443

System Operation

The vehicle horn system is activated under the following conditions:

- When the horn switch is depressed
- The BCM commands the horns ON under any of the following conditions:
  - When the content theft deterrent system detects a vehicle intrusion—For further information refer to Theft Systems Description and Operation.
  - When the panic button is depressed on the remote control door lock transmitter—For further information refer to *Keyless Entry System Description and Operation on page 7-19*.
  - When the keyless entry system is used to lock the vehicle, a horn chirp may sound to notify the driver that the vehicle has been locked. The notification feature may be enabled or disabled through personalization. For further information refer to *Keyless Entry System Description and Operation on page 7-19*.
  - When the OnStar® system is used to sound the horns if equipped—For further information, refer to OnStar Description and Operation.

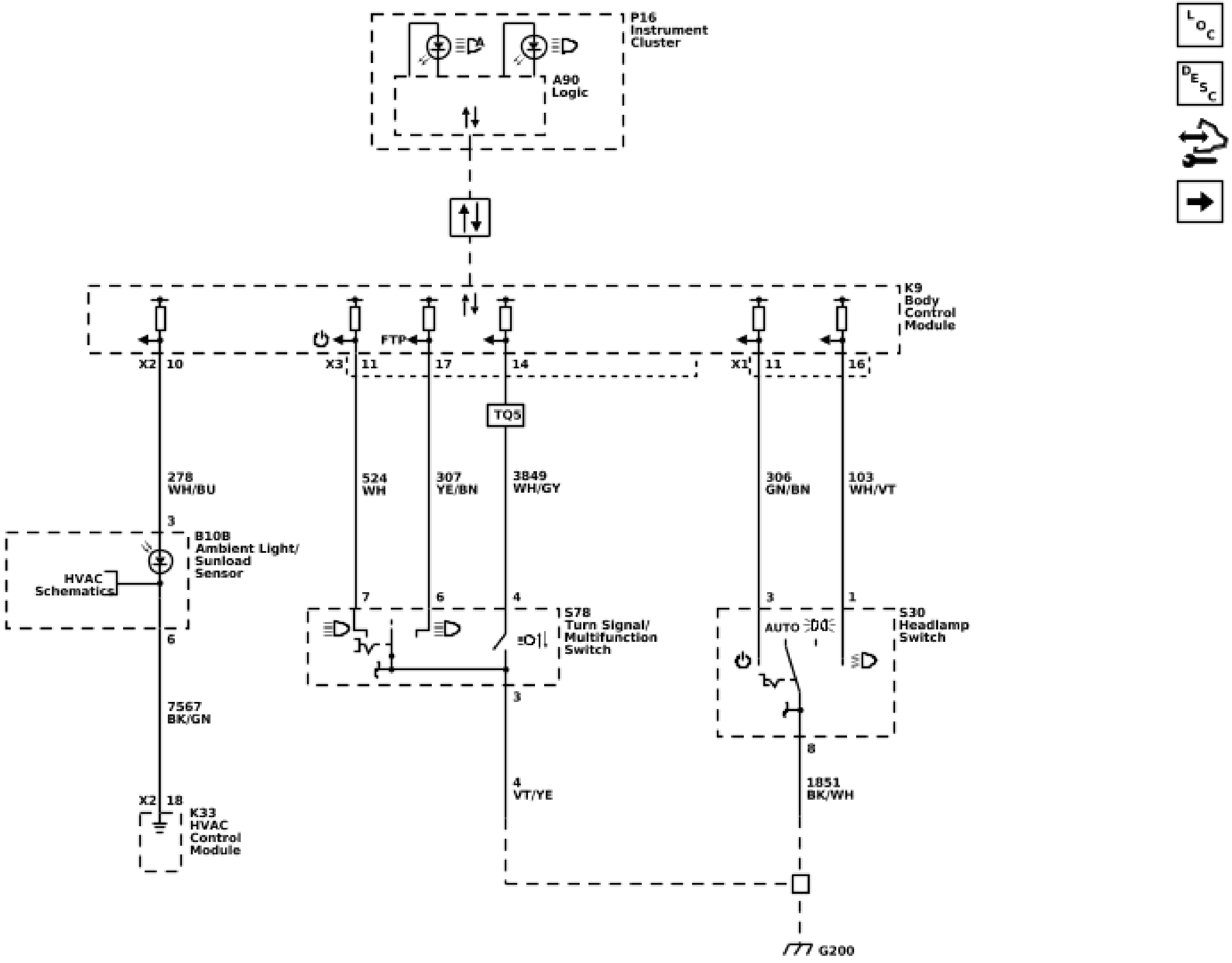
Circuit Operation

Battery positive voltage is applied at all times to the horn relay coil and the horn relay switch. Pressing either of the horn switches applies ground to the horn relay control circuit. The BCM may also apply ground to the horn relay control circuit as described above. When the horn relay control circuit is grounded, the horn relay is energized and battery positive voltage is applied to the horns through the horn control circuit. The horns sound as long as ground is applied to the horn relay control circuit.

Lighting

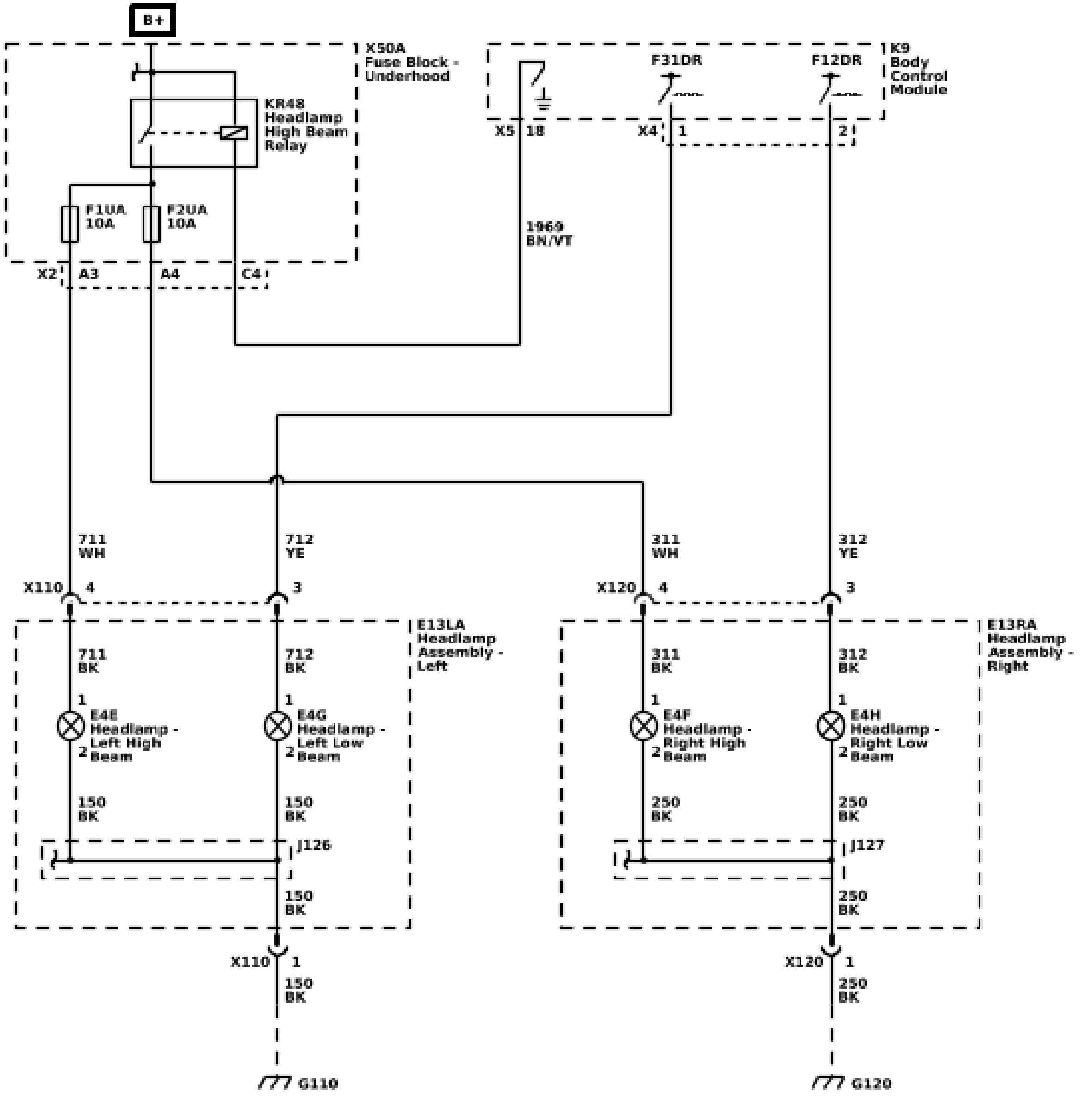
Schematic and Routing Diagrams

Headlights/Daytime Running Lights (DRL) Schematics (Controls and Indicators)


P16
Instrument
Cluster
A90
Logic
K9
Body
Control
Module
FTP
X2 10
X3 11
17
14
X1 11
16
TQ5
278
WH/BU
524
WH
307
YE/BN
3849
WH/GY
306
GN/BN
103
WH/VT
3
B10B
Ambient Light/
Sunload
Sensor
HVAC
Schematics
6
7
6
4
S78
Turn Signal/
Multifunction
Switch
3
1
AUTO
S30
Headlamp
Switch
3
7567
BK/GN
8
4
VT/YE
1851
BK/WH
X2 18
K33
HVAC
Control
Module
G200

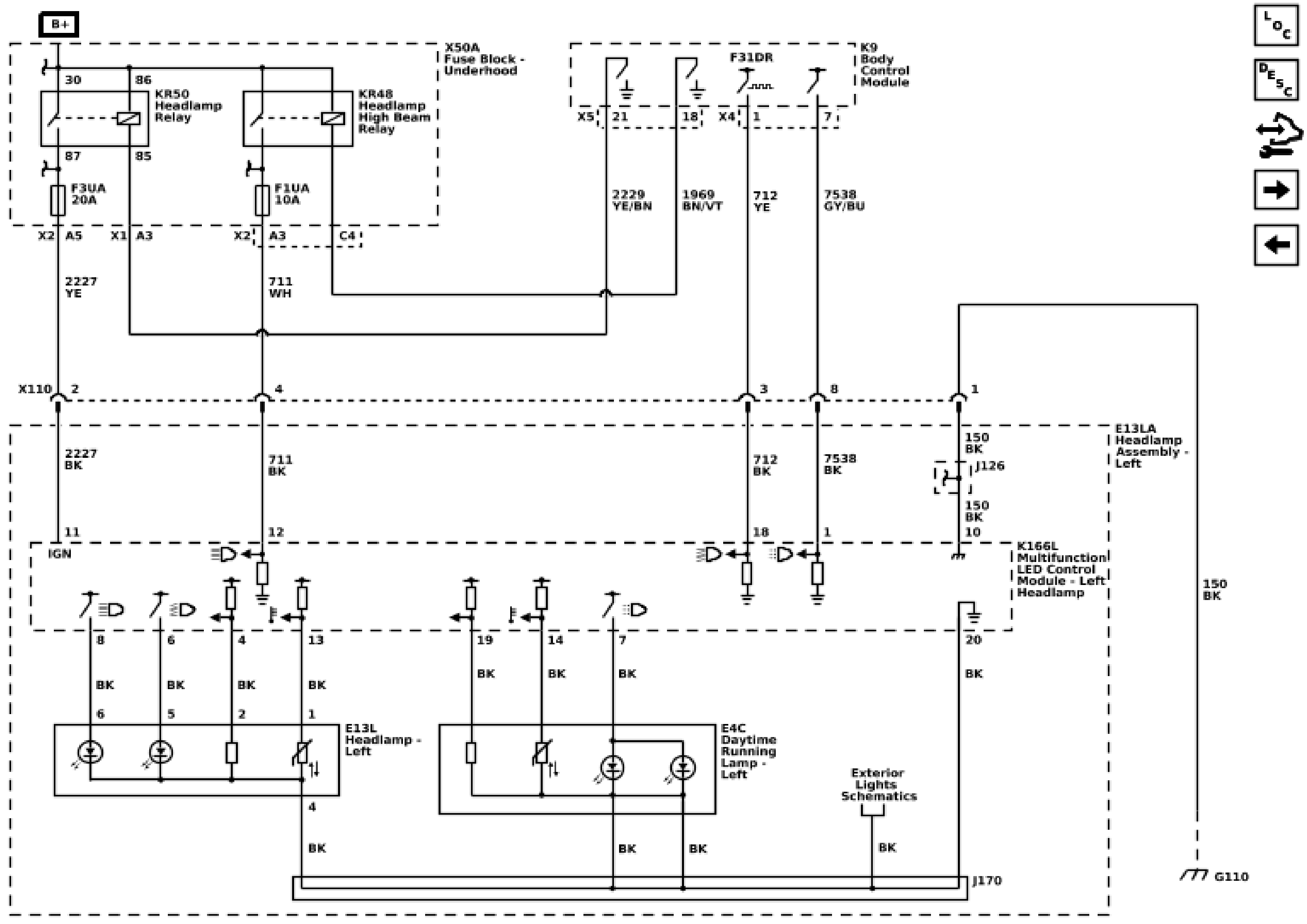
5995349

Headlights/Daytime Running Lights (DRL) Schematics (Headlamps (X88 with T4A))

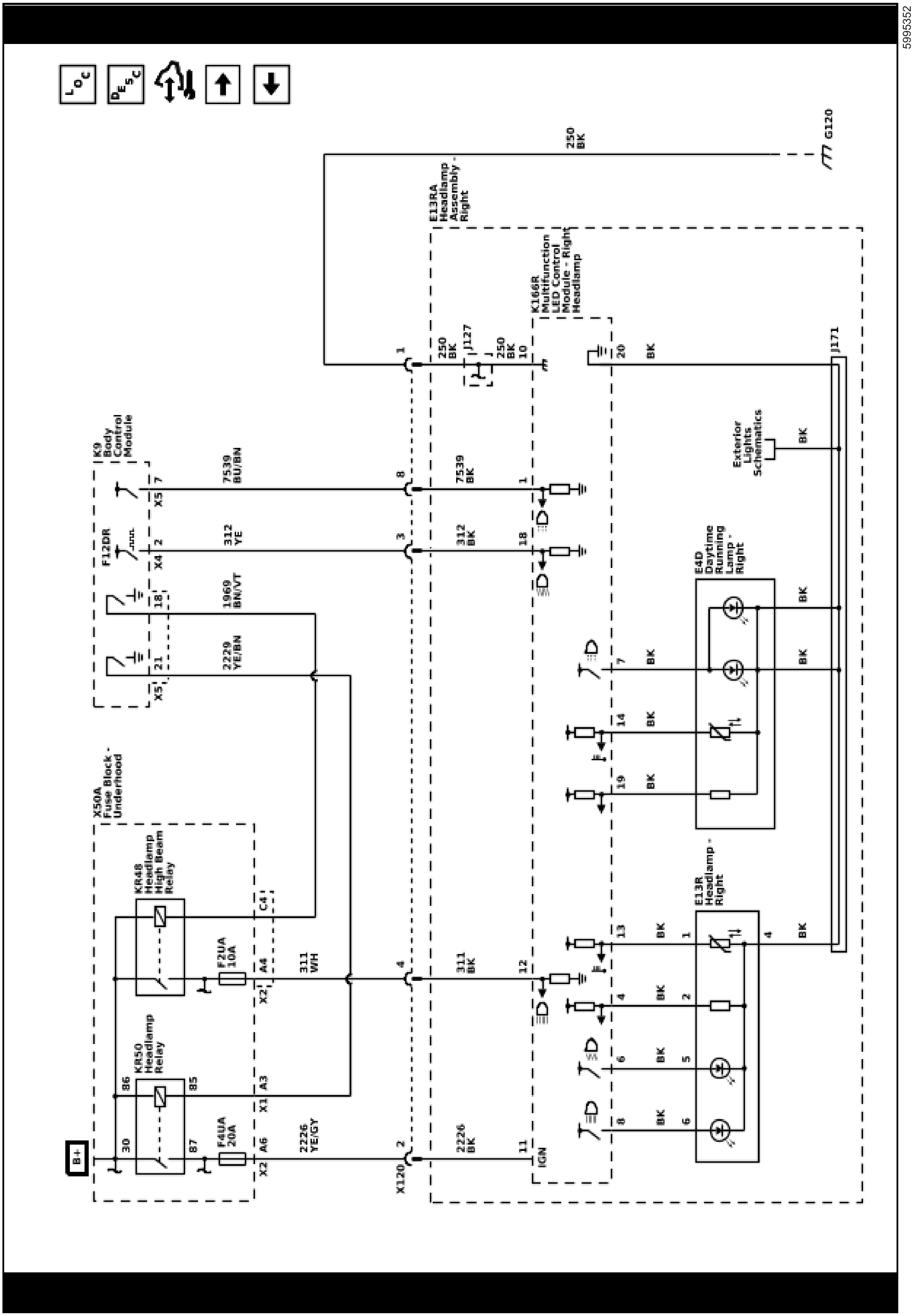

B+
1
X50A
Fuse Block - Underhood
KR48
Headlamp High Beam Relay
F1UA
10A
F2UA
10A
X2
A3
A4
C4
K9
Body Control Module
F31DR
F12DR
X5
18
X4
1
2
1969
BN/VT
711
WH
712
YE
311
WH
312
YE
X110
4
3
X120
4
3
E13LA
Headlamp Assembly - Left
E13RA
Headlamp Assembly - Right
711
BK
712
BK
311
BK
312
BK
1
E4E
Headlamp - Left High Beam
2
E4G
Headlamp - Left Low Beam
E4F
Headlamp - Right High Beam
E4H
Headlamp - Right Low Beam
150
BK
250
BK
J126
J127
X110
1
150
BK
X120
1
250
BK
G110
G120

5995350

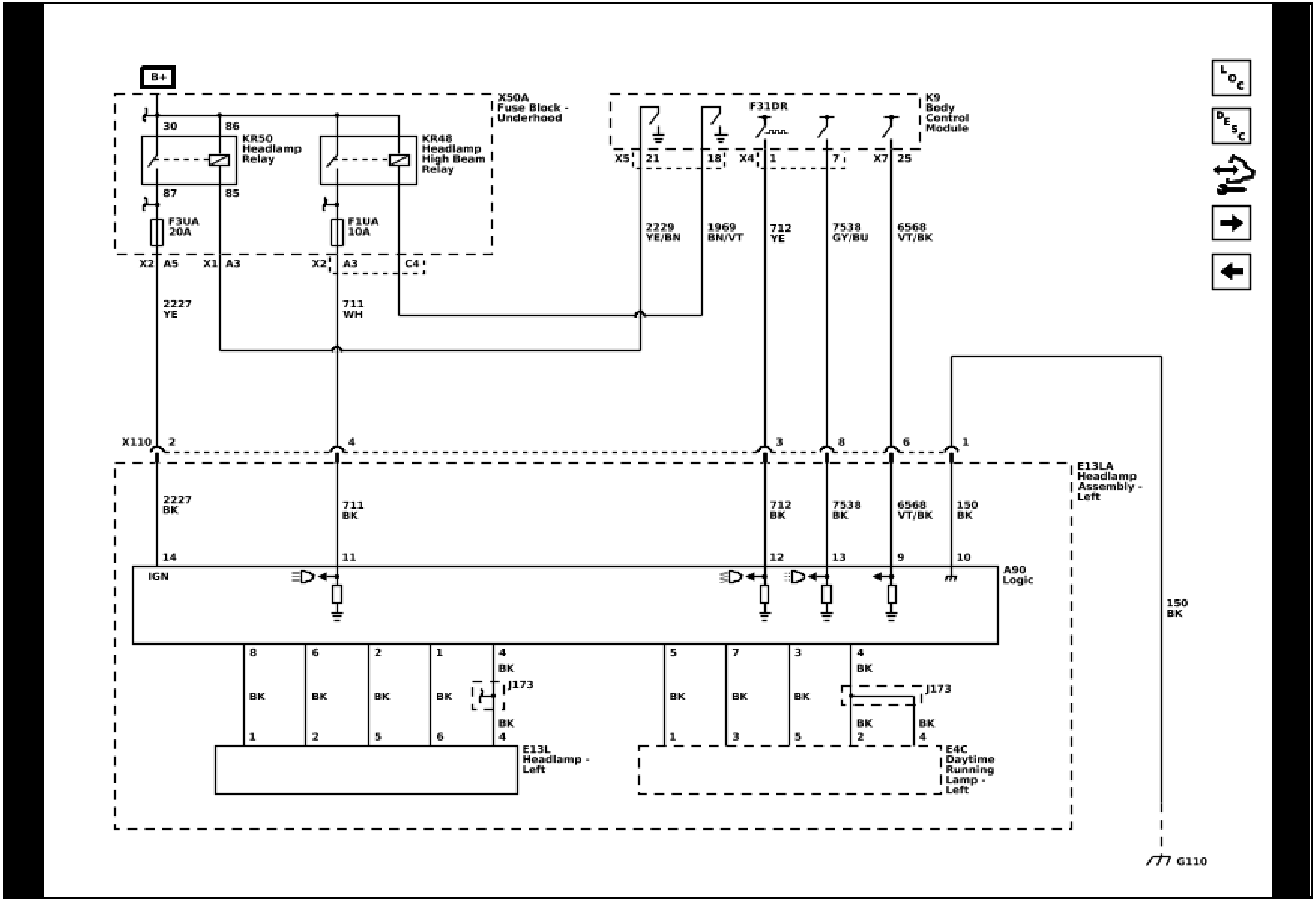
Headlights/Daytime Running Lights (DRL) Schematics (Headlamps and Daytime Running Lamps - Left (X88 with T4L))


B+
X50A Fuse Block - Underhood
30
86
KR50 Headlamp Relay
87
85
KR48 Headlamp High Beam Relay
F3UA 20A
F1UA 10A
X2 A5
X1 A3
X2 A3
C4
K9 Body Control Module
F31DR
X5 21
18
X4 1
7
2229 YE/BN
1969 BN/VT
712 YE
7538 GY/BU
2227 YE
711 WH
X110 2
4
3
8
1
E13LA Headlamp Assembly - Left
2227 BK
711 BK
712 BK
7538 BK
150 BK
J126
150 BK
11
12
18
1
10
IGN
K166L Multifunction LED Control Module - Left Headlamp
8
6
4
13
19
14
7
20
BK
6
5
2
1
E13L Headlamp - Left
4
E4C Daytime Running Lamp - Left
Exterior Lights Schematics
J170
150 BK
G110
5995351

Headlights/Daytime Running Lights (DRL) Schematics (Headlamps and Daytime Running Lamps - Right (X88 with T4L))

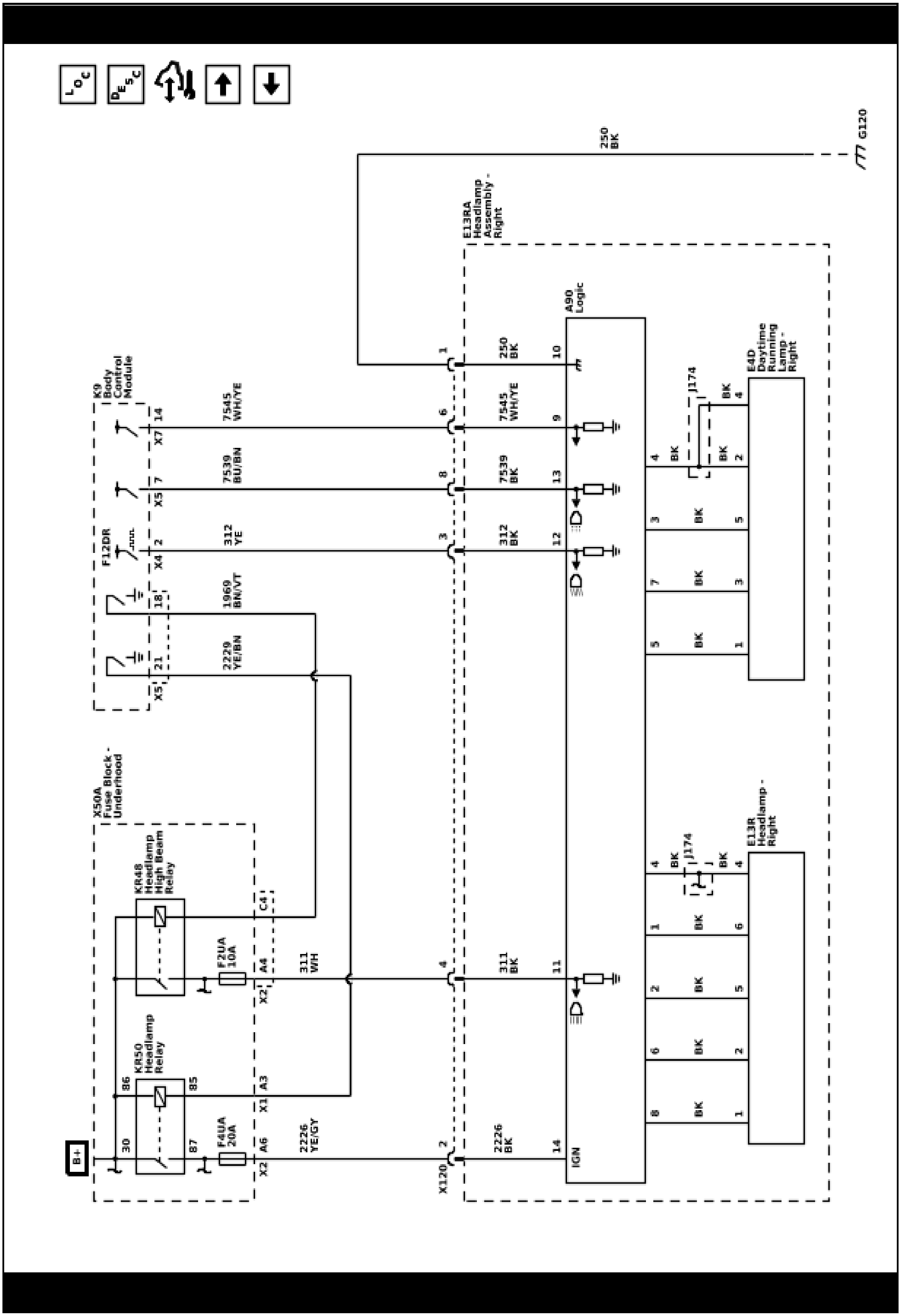

5995352
B+
X50A Fuse Block - Underhood
KR50 Headlamp Relay
30
86
85
87
KR48 Headlamp High Beam Relay
F4UA 20A
F2UA 10A
X2 A6
X1 A3
X2 A4
C4
2226 YE/GY
311 WH
2229 YE/BN
1969 BN/VT
312 YE
7539 BU/BN
K9 Body Control Module
F12DR
X5 21
18
X4 2
X5 7
X120
2
4
3
8
1
2226 BK
311 BK
312 BK
7539 BK
250 BK
J127
250 BK
10
11 IGN
12
18
1
20
250 BK
G120
E13RA Headlamp Assembly - Right
K166R Multifunction LED Control Module - Right Headlamp
8
6
4
13
19
14
7
BK
E13R Headlamp - Right
6
5
2
1
4
E4D Daytime Running Lamp - Right
Exterior Lights Schematics
J171

Headlights/Daytime Running Lights (DRL) Schematics (Headlamps and Daytime Running Lamps - Left (Z88 with GFF/GFI))


B+
X50A Fuse Block - Underhood
30
86
KR50 Headlamp Relay
87
85
KR48 Headlamp High Beam Relay
F3UA 20A
F1UA 10A
X2 A5
X1 A3
X2 A3
C4
2227 YE
711 WH
K9 Body Control Module
F31DR
X5 21
18
X4 1
7
X7 25
2229 YE/BN
1969 BN/VT
712 YE
7538 GY/BU
6568 VT/BK
X110 2
4
3
8
6
1
E13LA Headlamp Assembly - Left
2227 BK
711 BK
712 BK
7538 BK
6568 VT/BK
150 BK
14
11
12
13
9
10
IGN
A90 Logic
8
6
2
1
4
BK
J173
1
2
5
6
4
E13L Headlamp - Left
5
7
3
4
BK
J173
BK
1
3
5
2
4
E4C Daytime Running Lamp - Left
150 BK
G110

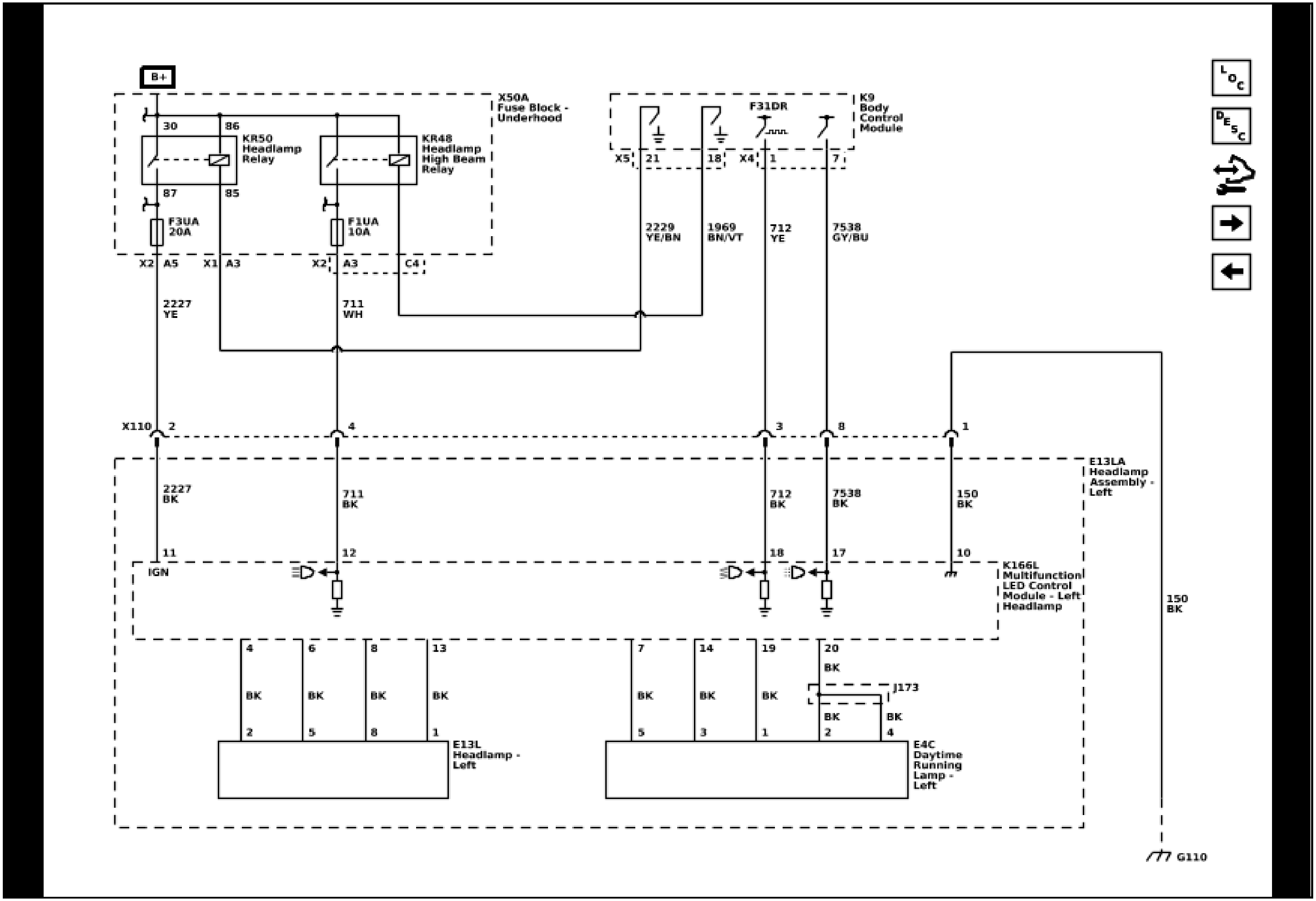
5995353

Headlights/Daytime Running Lights (DRL) Schematics (Headlamps and Daytime Running Lamps - Right (Z88 with GFF/GFI))


B+
30
87
86
85
KR50 Headlamp Relay
KR48 Headlamp High Beam Relay
F4UA 20A
F2UA 10A
X2 A6
X1 A3
X2 A4
C4
X50A Fuse Block - Underhood
2226 YE/GY
311 WH
X5 21
18
X4 2
X5 7
X7 14
F12DR
K9 Body Control Module
2229 YE/BN
1969 BN/VT
312 YE
7539 BU/BN
7545 WH/YE
X120
2
4
3
8
6
1
2226 BK
311 BK
312 BK
7539 BK
7545 WH/YE
250 BK
14 IGN
11
12
13
9
10
A90 Logic
E13RA Headlamp Assembly - Right
250 BK
G120
8
6
2
1
4
BK
J174
E13R Headlamp - Right
1
2
5
6
4
5
7
3
4
E4D Daytime Running Lamp - Right
1
3
5
2
4

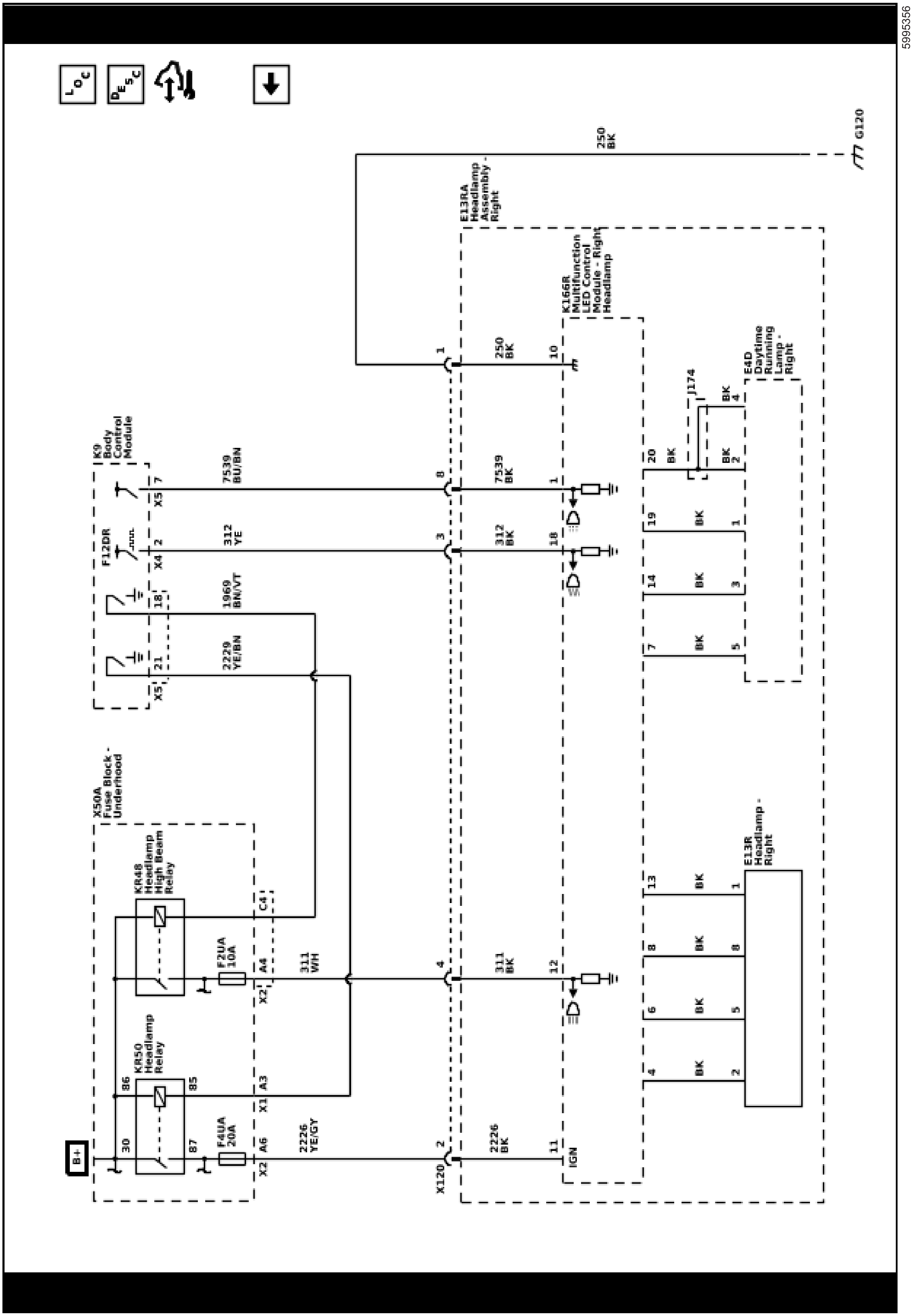
5995354

Headlights/Daytime Running Lights (DRL) Schematics (Headlamps and Daytime Running Lamps - Left (Z88 with GFU/GFG/GFW))

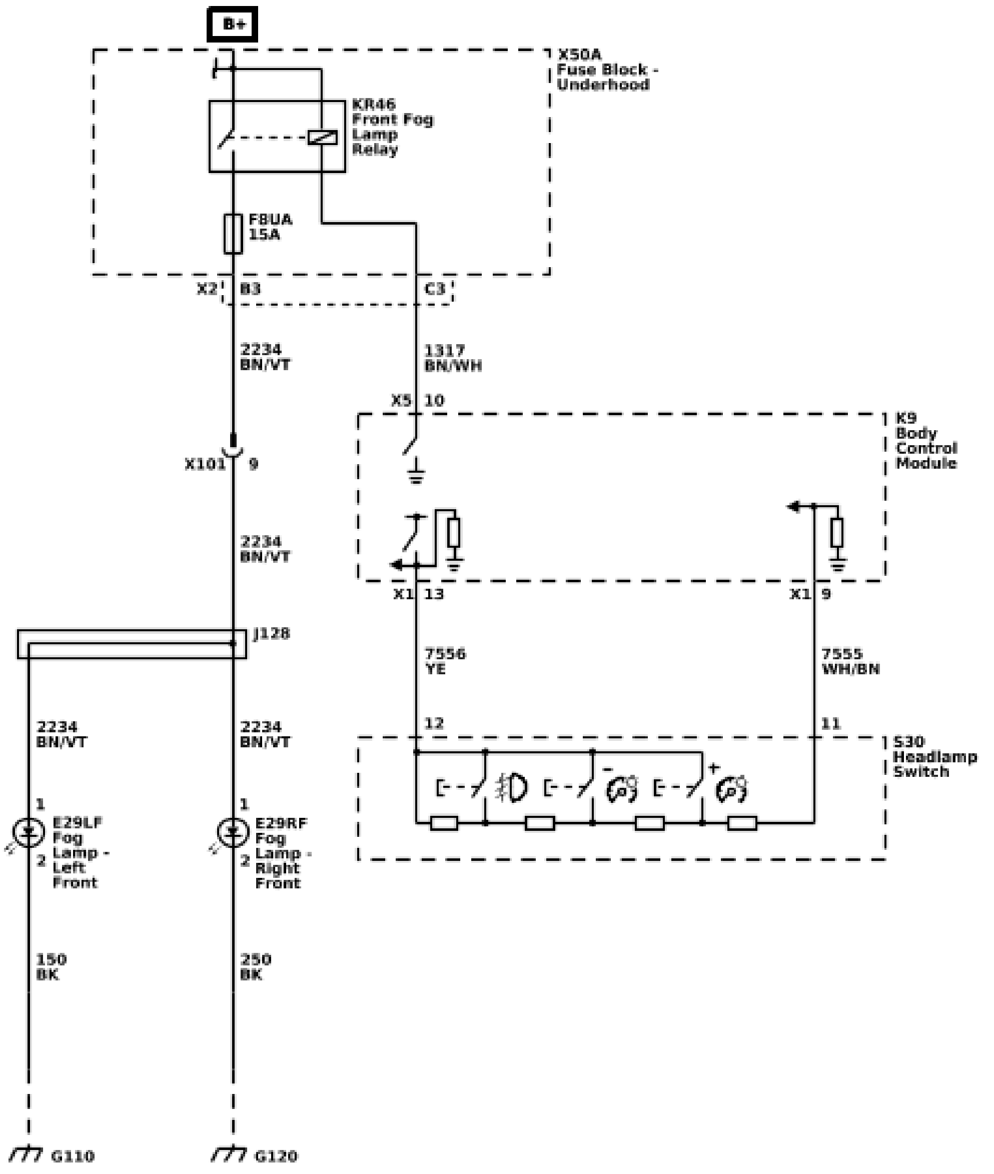

B+
X50A Fuse Block - Underhood
30
86
KR50 Headlamp Relay
87
85
F3UA 20A
KR48 Headlamp High Beam Relay
F1UA 10A
X2 A5
X1 A3
X2 A3
C4
2227 YE
711 WH
F31DR
K9 Body Control Module
X5 21
18
X4 1
7
2229 YE/BN
1969 BN/VT
712 YE
7538 GY/BU
X110 2
4
3
8
1
E13LA Headlamp Assembly - Left
2227 BK
711 BK
712 BK
7538 BK
150 BK
11
12
18
17
10
IGN
K166L Multifunction LED Control Module - Left Headlamp
4
6
8
13
BK
BK
BK
BK
2
5
8
1
E13L Headlamp - Left
7
14
19
20
BK
BK
BK
BK
J173
BK
BK
5
3
1
2
4
E4C Daytime Running Lamp - Left
150 BK
G110

5995355

Headlights/Daytime Running Lights (DRL) Schematics (Headlamps and Daytime Running Lamps - Right (Z88 with GFU/GFG/GFW))

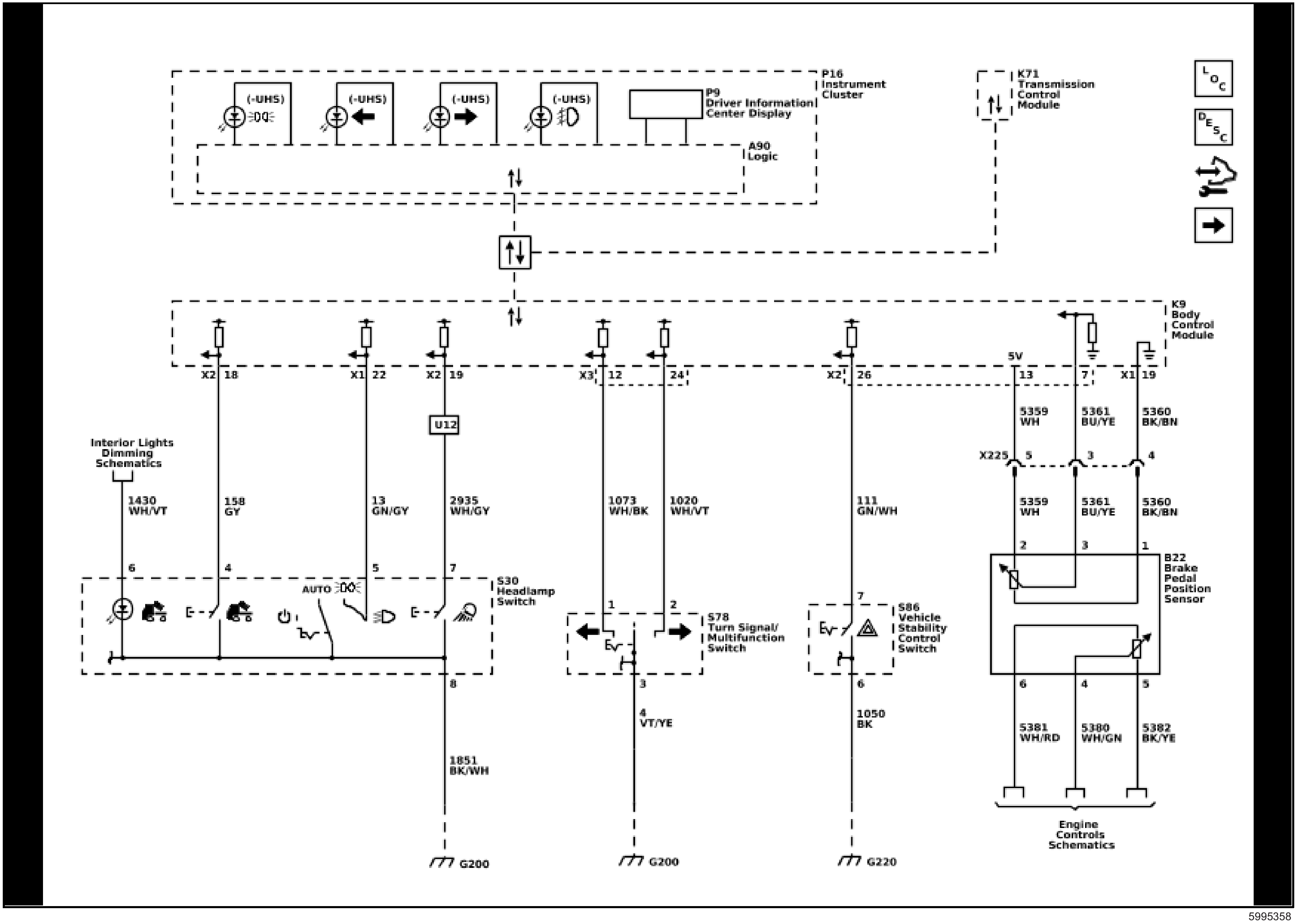

5995356
B+
X50A Fuse Block - Underhood
KR50 Headlamp Relay
30
86
85
87
F4UA 20A
X2 A6
X1 A3
KR48 Headlamp High Beam Relay
F2UA 10A
X2 A4
C4
2226 YE/GY
311 WH
X120
2
4
2226 BK
311 BK
11 IGN
12
K9 Body Control Module
X5 21
18
F12DR
X4 2
X5 7
2229 YE/BN
1960 BN/VT
312 YE
7539 BU/BN
3
8
312 BK
7539 BK
18
1
1
250 BK
10
E13RA Headlamp Assembly - Right
K166R Multifunction LED Control Module - Right Headlamp
4 BK 2
6 BK 5
8 BK 8
13 BK 1
E13R Headlamp - Right
7 BK 5
14 BK 3
19 BK 1
20 BK
BK 2
J174
BK 4
E4D Daytime Running Lamp - Right
250 BK
G120

Fog Lights Schematics (Fog Lamps (T3U))

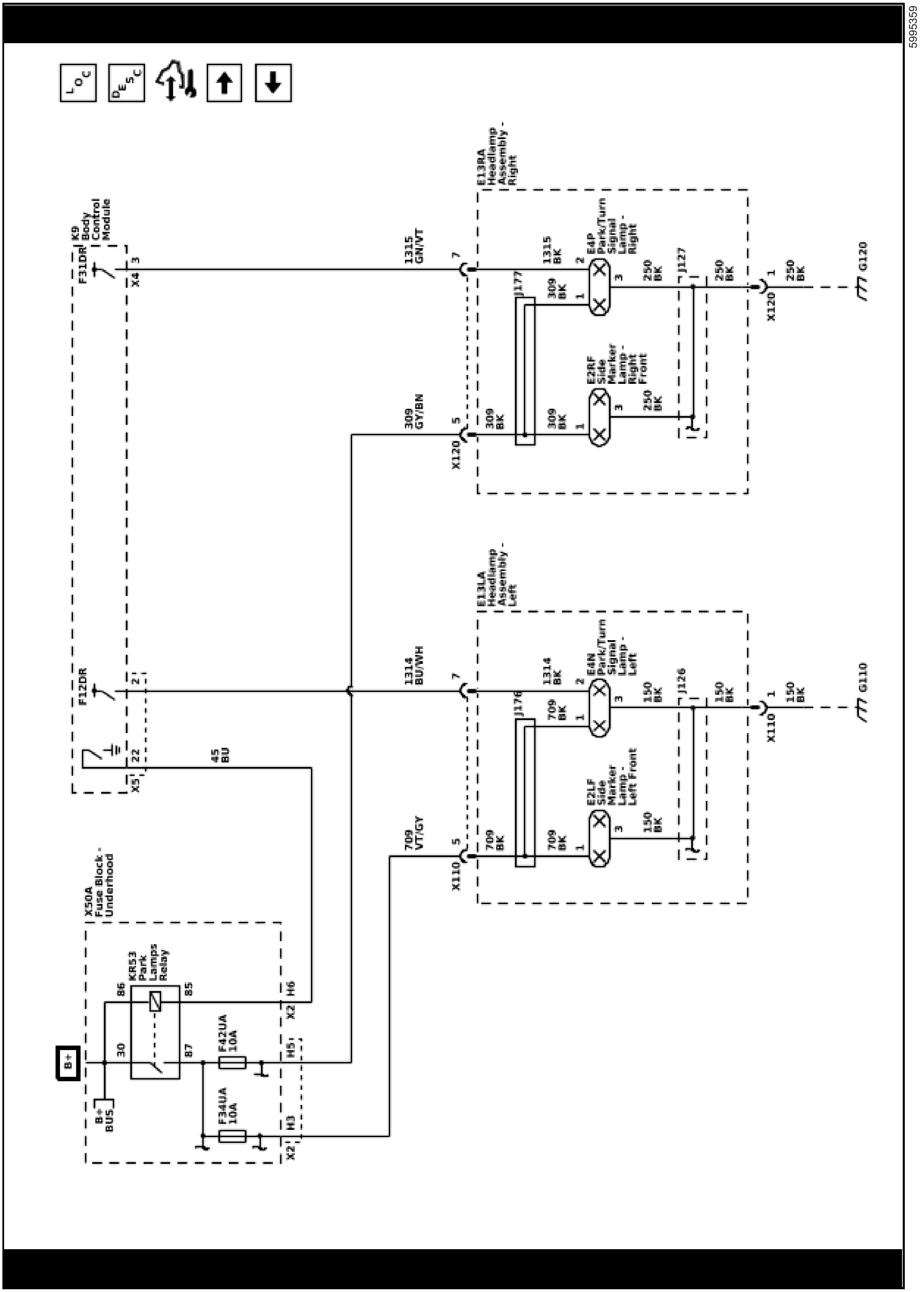

B+
X50A
Fuse Block - Underhood
KR46
Front Fog Lamp Relay
F8UA
15A
X2
B3
C3
2234
BN/VT
1317
BN/WH
X5
10
K9
Body Control Module
X101
9
2234
BN/VT
X1
13
X1
9
J128
7556
YE
7555
WH/BN
2234
BN/VT
2234
BN/VT
12
11
S30
Headlamp Switch
1
E29LF
Fog Lamp - Left Front
2
1
E29RF
Fog Lamp - Right Front
2
150
BK
250
BK
G110
G120

5995357

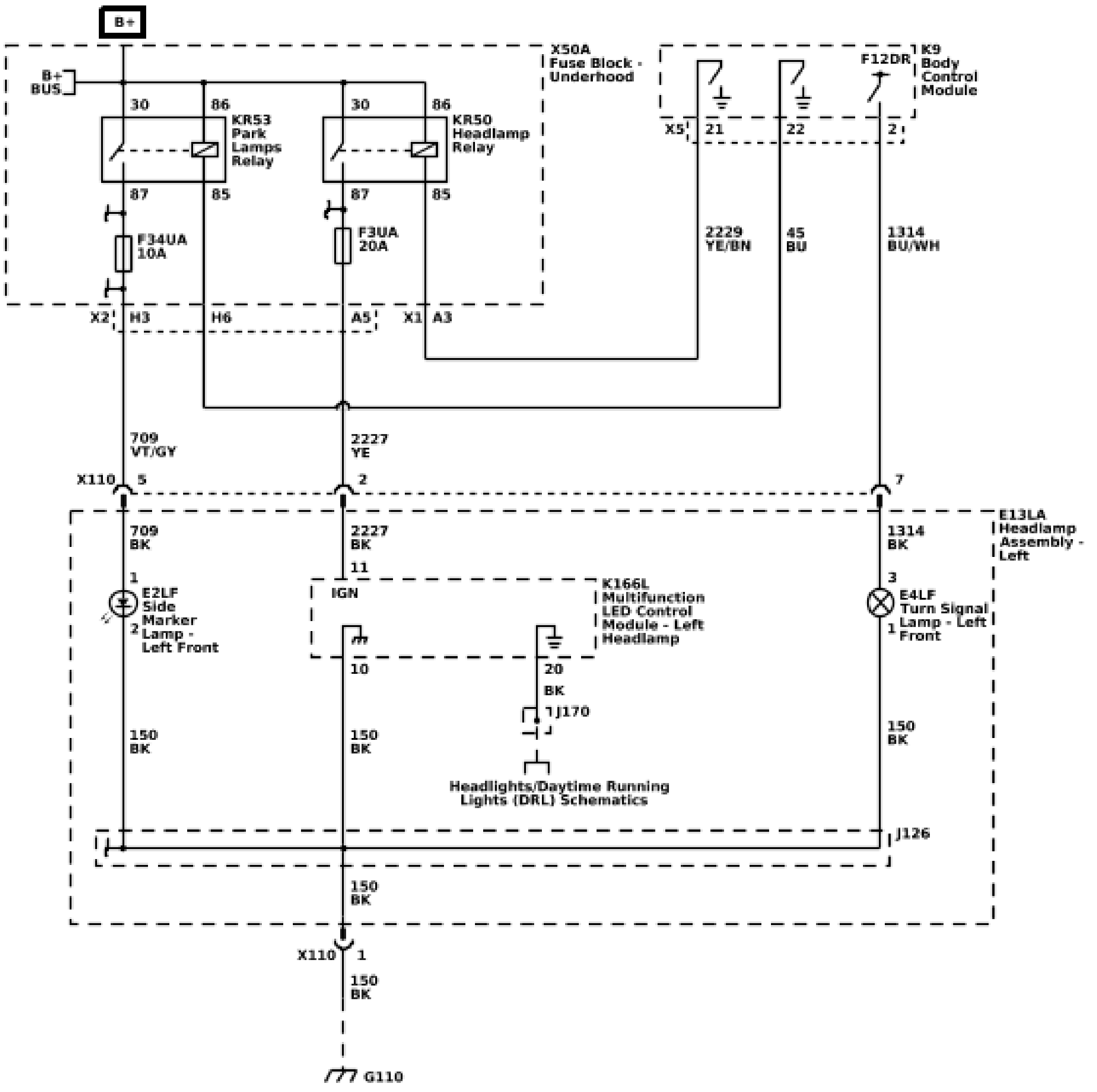
Exterior Lights Schematics (Controls and Indictors)


P16 Instrument Cluster
(-UHS)
(-UHS)
(-UHS)
(-UHS)
P9 Driver Information Center Display
A90 Logic
K71 Transmission Control Module
K9 Body Control Module
X2 18
X1 22
X2 19
X3 12
24
X2 26
5V
13
7
X1 19
U12
Interior Lights Dimming Schematics
1430 WH/VT
158 GY
13 GN/GY
2935 WH/GY
1073 WH/BK
1020 WH/VT
111 GN/WH
5359 WH
5361 BU/YE
5360 BK/BN
X225 5
3
4
6
4
5
7
AUTO
S30 Headlamp Switch
8
1851 BK/WH
G200
1
2
S78 Turn Signal/ Multifunction Switch
3
4 VT/YE
G200
7
S86 Vehicle Stability Control Switch
6
1050 BK
G220
2
3
1
B22 Brake Pedal Position Sensor
6
4
5
5381 WH/RD
5380 WH/GN
5382 BK/YE
Engine Controls Schematics
5995358

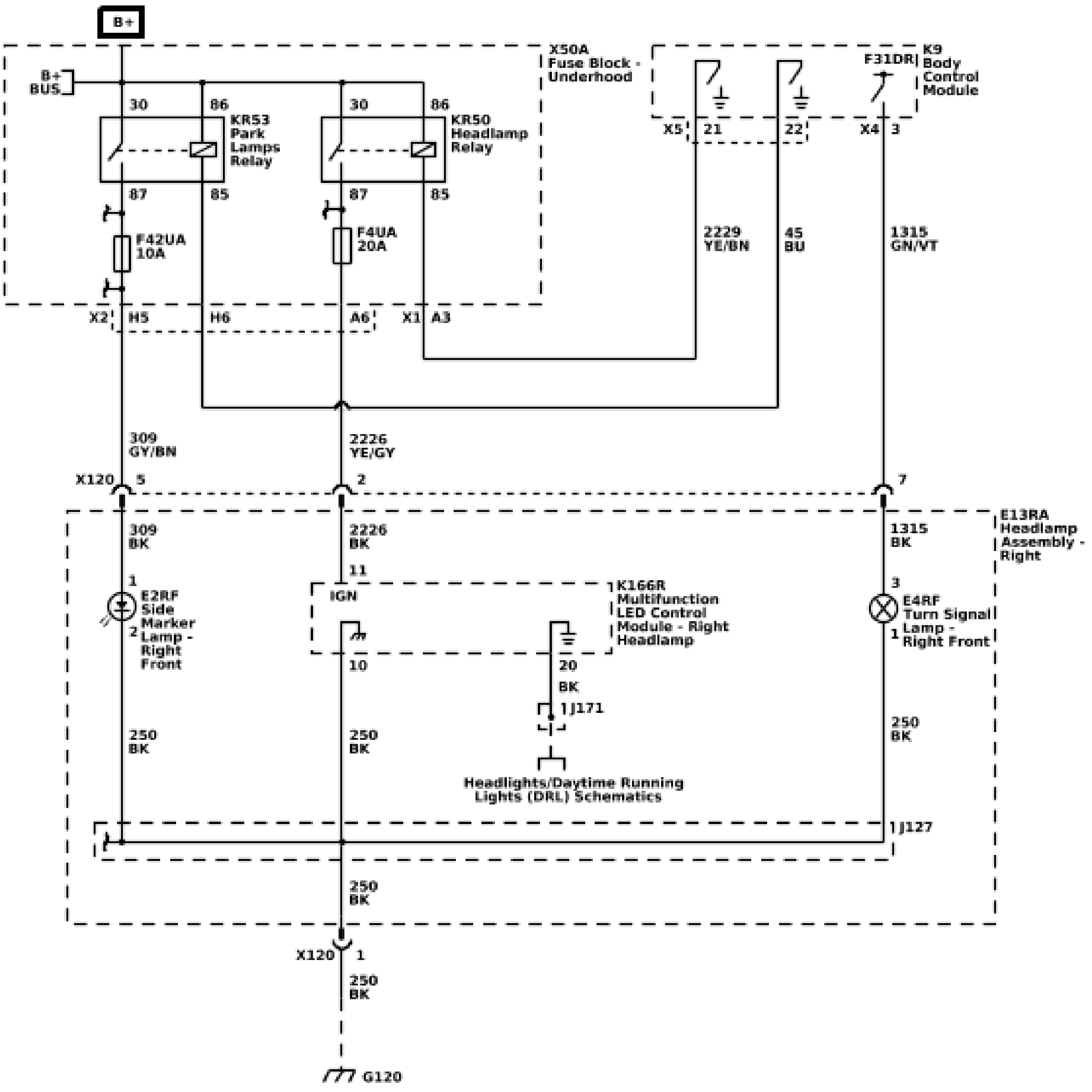
Exterior Lights Schematics (Front Turn Signals, Park Lamps, and Side Marker Lamps (X88 with T4A))


5995359
B+
B+ BUS
X50A Fuse Block - Underhood
KR53 Park Lamps Relay
86
30
85
87
F42UA 10A
F34UA 10A
X2 H6
H5
X2 H3
45 BU
K9 Body Control Module
F31DR
X4 3
F12DR
2
X5 22
1315 GN/VT
309 GY/BN
1314 BU/WH
709 VT/GY
X120 7
X120 5
X110 7
X110 5
E13RA Headlamp Assembly - Right
E13LA Headlamp Assembly - Left
E4P Park/Turn Signal Lamp - Right
E2RF Side Marker Lamp - Right Front
E4N Park/Turn Signal Lamp - Left
E2LF Side Marker Lamp - Left Front
1315 BK
309 BK
250 BK
1314 BK
709 BK
150 BK
J177
J127
J176
J126
1
2
3
X120 1
X110 1
G120
G110

Exterior Lights Schematics (Front Turn Signals, Park Lamps, and Side Marker Lamps - Left (X88 with T4L))

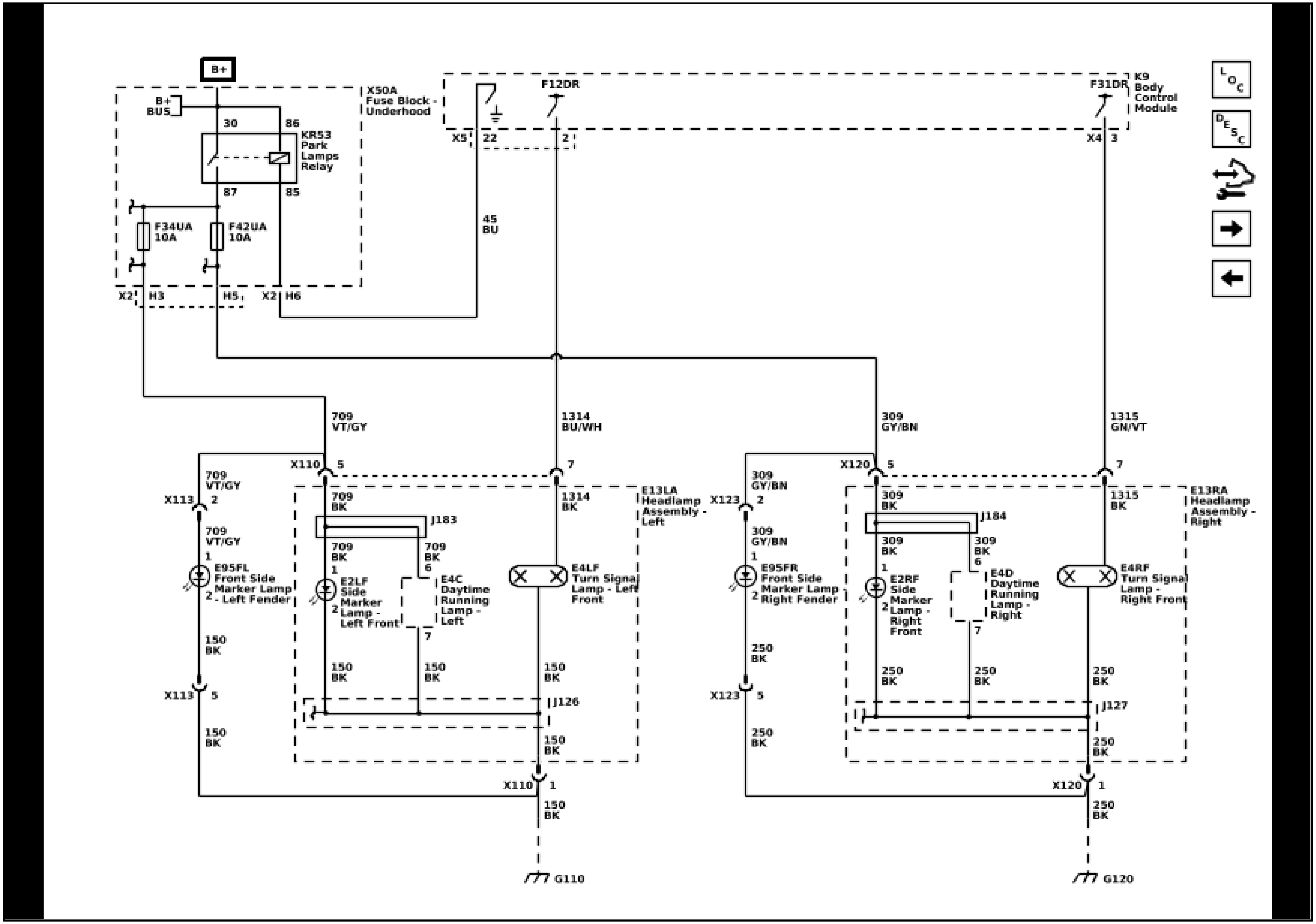

B+
B+ BUS
X50A Fuse Block - Underhood
30
86
KR53 Park Lamps Relay
87
85
F34UA 10A
30
86
KR50 Headlamp Relay
87
85
F3UA 20A
X2
H3
H6
A5
X1
A3
X5
21
22
2
F12DR
K9 Body Control Module
2229 YE/BN
45 BU
1314 BU/WH
709 VT/GY
2227 YE
X110
5
2
7
E13LA Headlamp Assembly - Left
709 BK
2227 BK
1314 BK
1
E2LF Side Marker Lamp - Left Front
2
11
IGN
K166L Multifunction LED Control Module - Left Headlamp
10
20
BK
J170
3
E4LF Turn Signal Lamp - Left Front
1
150 BK
150 BK
150 BK
Headlights/Daytime Running Lights (DRL) Schematics
J126
150 BK
X110
1
150 BK
G110
5995360

Exterior Lights Schematics (Front Turn Signals, Park Lamps, and Side Marker Lamps - Right (X88 with T4L))


B+
B+ BUS
X50A Fuse Block - Underhood
30
86
KR53 Park Lamps Relay
87
85
F42UA 10A
30
86
KR50 Headlamp Relay
87
85
F4UA 20A
X2 H5
H6
A6
X1 A3
K9 Body Control Module
F31DR
X5 21
22
X4 3
2229 YE/BN
45 BU
1315 GN/VT
309 GY/BN
2226 YE/GY
X120 5
2
7
E13RA Headlamp Assembly - Right
309 BK
2226 BK
1315 BK
11
IGN
K166R Multifunction LED Control Module - Right Headlamp
1
E2RF Side Marker Lamp - Right Front
2
3
E4RF Turn Signal Lamp - Right Front
1
10
20
BK
J171
Headlights/Daytime Running Lights (DRL) Schematics
250 BK
250 BK
250 BK
J127
250 BK
X120 1
250 BK
G120

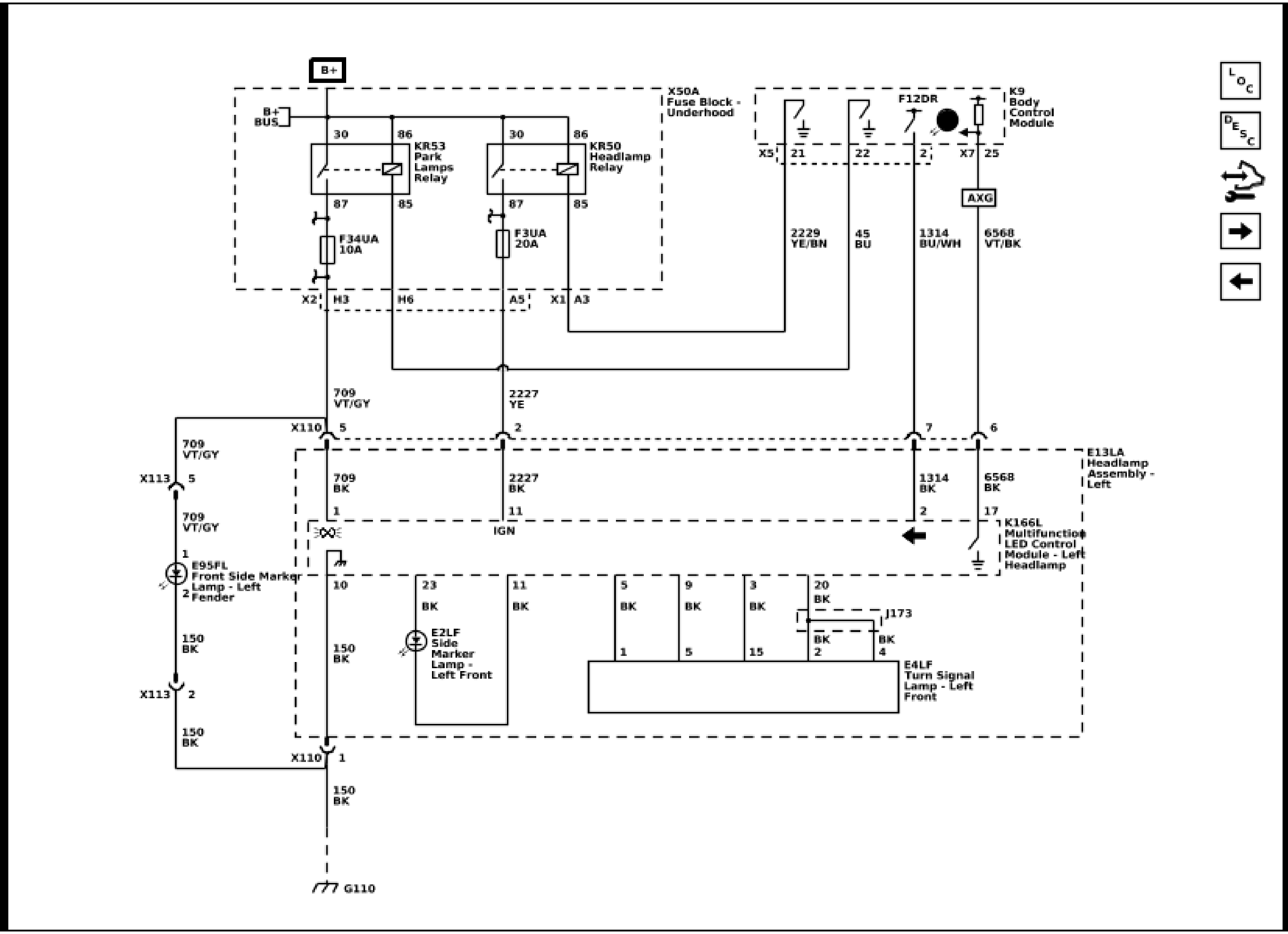
5995361

Exterior Lights Schematics (Front Turn Signals, Park Lamps, and Side Marker Lamps (Z88 with GFF/GFI))


B+
B+ BUS
30
86
KR53 Park Lamps Relay
87
85
X50A Fuse Block - Underhood
F34UA 10A
F42UA 10A
X2 H3
H5
X2 H6
45 BU
X5 22
F12DR
2
F31DR
K9 Body Control Module
X4 3
709 VT/GY
1314 BU/WH
309 GY/BN
1315 GN/VT
X110 5
7
X120 5
7
X113 2
709 VT/GY
709 VT/GY
1
E95FL Front Side Marker Lamp - Left Fender
2
150 BK
X113 5
150 BK
709 BK
J183
709 BK
1
709 BK
6
E2LF Side Marker Lamp - Left Front
2
E4C Daytime Running Lamp - Left
7
1314 BK
E4LF Turn Signal Lamp - Left Front
E13LA Headlamp Assembly - Left
150 BK
150 BK
150 BK
J126
150 BK
X110 1
150 BK
G110
X123 2
309 GY/BN
309 GY/BN
1
E95FR Front Side Marker Lamp - Right Fender
2
250 BK
X123 5
250 BK
309 BK
J184
309 BK
1
309 BK
6
E2RF Side Marker Lamp - Right Front
2
E4D Daytime Running Lamp - Right
7
1315 BK
E4RF Turn Signal Lamp - Right Front
E13RA Headlamp Assembly - Right
250 BK
250 BK
250 BK
J127
250 BK
X120 1
250 BK
G120
L O C
D E S C

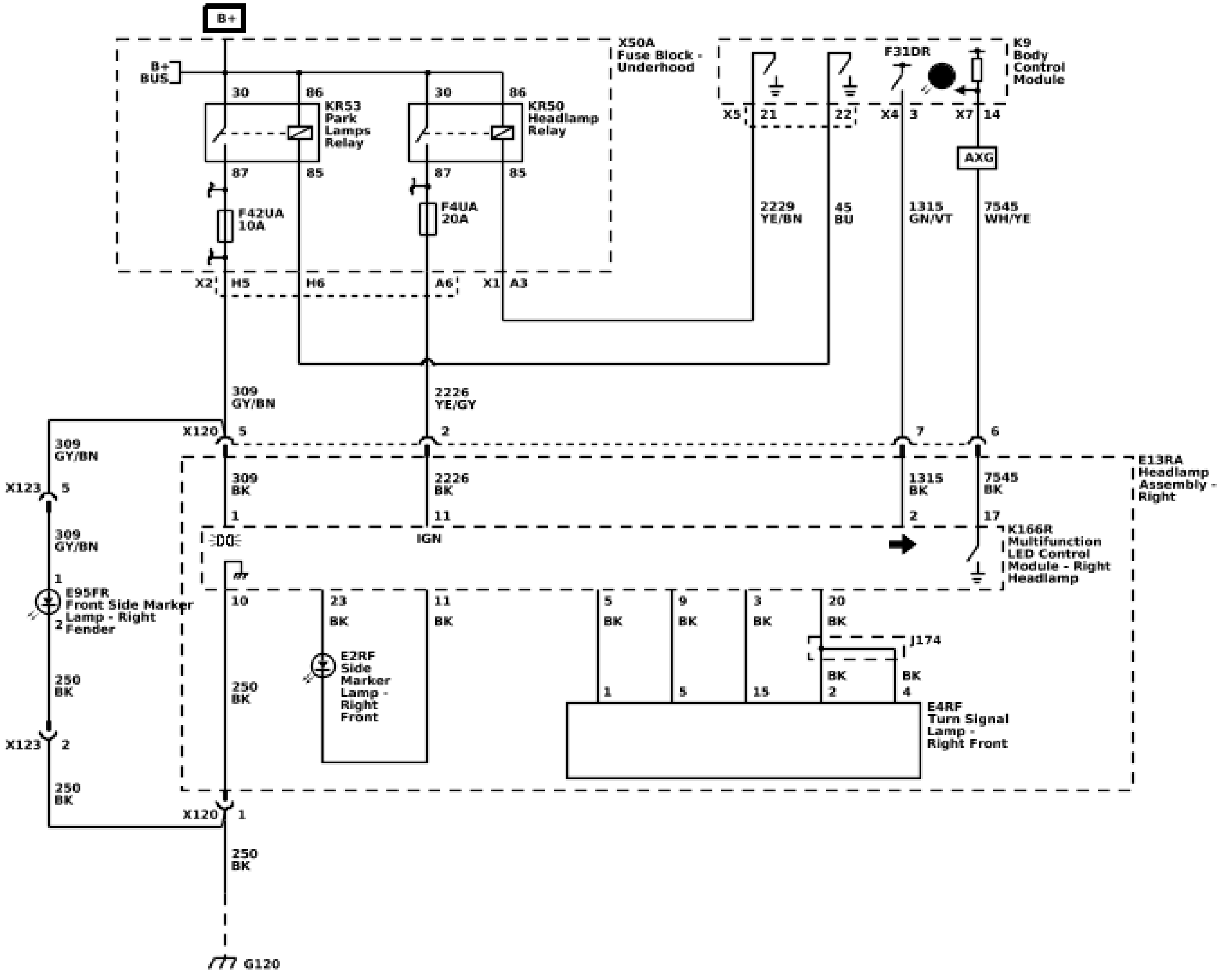
5995362

Exterior Lights Schematics (Front Turn Signals, Park Lamps, and Side Marker Lamps - Left (Z88 with GFU/GFG/GFW))


B+
B+ BUS
X50A Fuse Block - Underhood
30
86
KR53 Park Lamps Relay
87
85
F34UA 10A
30
86
KR50 Headlamp Relay
87
85
F3UA 20A
X2
H3
H6
A5
X1
A3
X5
21
22
2
X7
25
F12DR
K9 Body Control Module
AXG
2229 YE/BN
45 BU
1314 BU/WH
6568 VT/BK
709 VT/GY
2227 YE
X110
5
2
7
6
E13LA Headlamp Assembly - Left
709 BK
2227 BK
1314 BK
6568 BK
1
11
2
17
IGN
K166L Multifunction LED Control Module - Left Headlamp
709 VT/GY
X113
5
709 VT/GY
1
E95FL Front Side Marker Lamp - Left Fender
2
150 BK
X113
2
150 BK
10
150 BK
23
BK
E2LF Side Marker Lamp - Left Front
11
BK
5
BK
9
BK
3
BK
20
BK
J173
BK
2
BK
4
1
5
15
E4LF Turn Signal Lamp - Left Front
X110
1
150 BK
G110

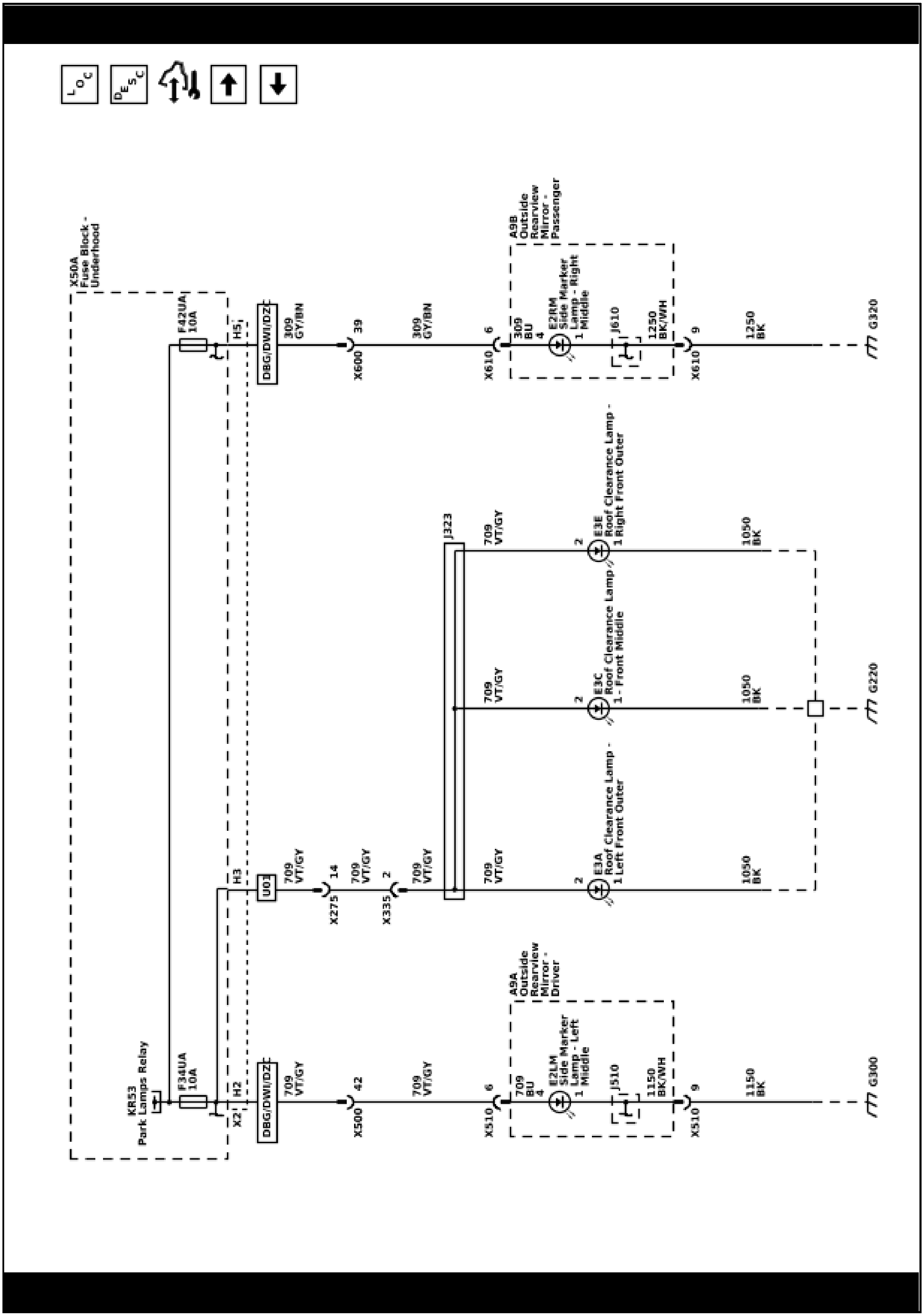
5995363

Exterior Lights Schematics (Front Turn Signals, Park Lamps, and Side Marker Lamps - Right (Z88 with GFU/GFG/GFW))


B+
B+ BUS
X50A Fuse Block - Underhood
30
86
KR53 Park Lamps Relay
87
85
F42UA 10A
30
86
KR50 Headlamp Relay
87
85
F4UA 20A
X2 H5
H6
A6
X1 A3
K9 Body Control Module
F31DR
X5 21
22
X4 3
X7 14
AXG
2229 YE/BN
45 BU
1315 GN/VT
7545 WH/YE
309 GY/BN
2226 YE/GY
X120 5
2
7
6
E13RA Headlamp Assembly - Right
309 BK
2226 BK
1315 BK
7545 BK
1
11
2
17
IGN
K166R Multifunction LED Control Module - Right Headlamp
10
23 BK
11 BK
5 BK
9 BK
3 BK
20 BK
J174
BK 2
BK 4
1
5
15
E4RF Turn Signal Lamp - Right Front
E2RF Side Marker Lamp - Right Front
250 BK
X120 1
250 BK
G120
309 GY/BN
X123 5
309 GY/BN
1
E95FR Front Side Marker Lamp - Right Fender
2
250 BK
X123 2
250 BK

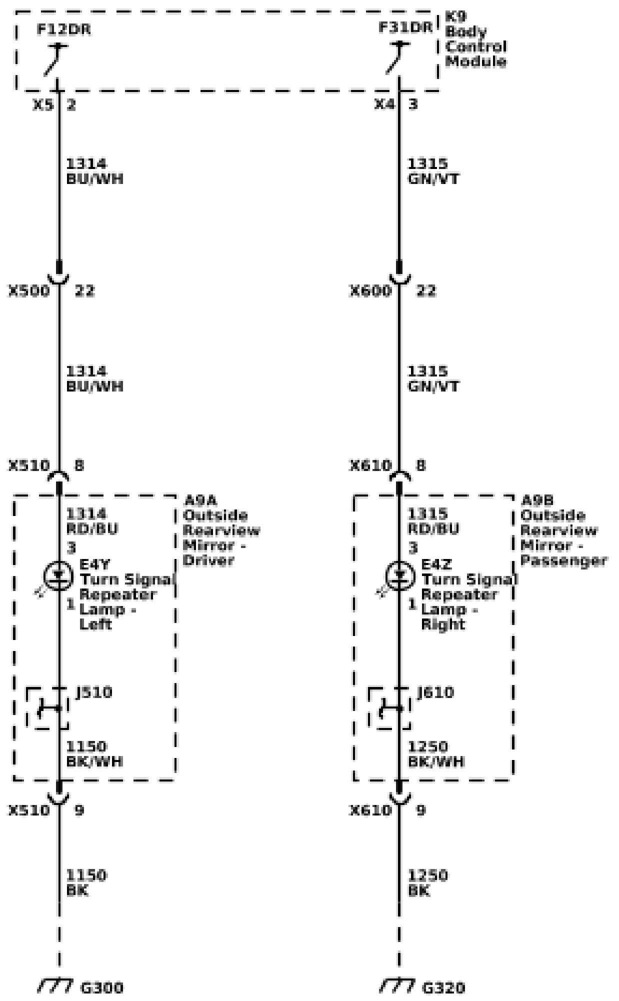
5995364

Exterior Lights Schematics (Park Lamps - Mirror (DBG/DWI/DZC) and Roof (U01))


X50A
Fuse Block - Underhood
KR53
Park Lamps Relay
F34UA
10A
F42UA
10A
X2
H2
H3
H5
DBG/DWI/DZC
U01
709
VT/GY
309
GY/BN
X500
42
X600
39
X275
14
X335
2
J323
X510
6
X610
6
A9A
Outside Rearview Mirror - Driver
A9B
Outside Rearview Mirror - Passenger
709
BU
4
309
BU
4
E2LM
Side Marker Lamp - Left
1 Middle
E2RM
Side Marker Lamp - Right
1 Middle
E3A
Roof Clearance Lamp - 1 Left Front Outer
E3C
Roof Clearance Lamp - 1 - Front Middle
E3E
Roof Clearance Lamp - 1 Right Front Outer
2
J510
J610
1150
BK/WH
1250
BK/WH
X510
9
X610
9
1150
BK
1250
BK
1050
BK
G300
G220
G320

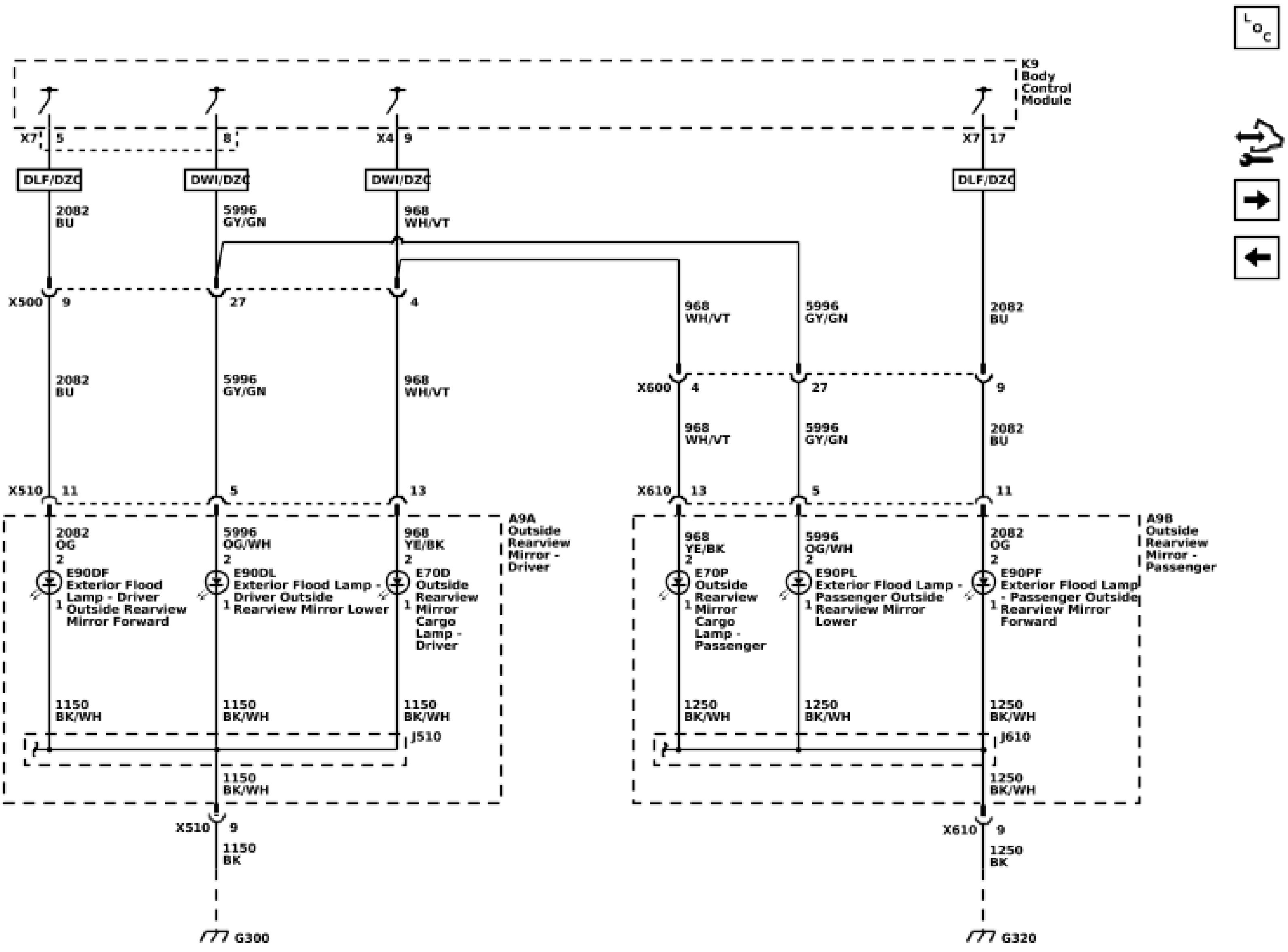
5995365

Exterior Lights Schematics (Turn Signal Lamps - Mirror (DBG/DWI/DZC))


F12DR
F31DR
K9
Body
Control
Module
X5 2
X4 3
1314
BU/WH
1315
GN/VT
X500 22
X600 22
1314
BU/WH
1315
GN/VT
X510 8
X610 8
1314
RD/BU
3
E4Y
Turn Signal
Repeater
Lamp -
Left
1
A9A
Outside
Rearview
Mirror -
Driver
1315
RD/BU
3
E4Z
Turn Signal
Repeater
Lamp -
Right
1
A9B
Outside
Rearview
Mirror -
Passenger
J510
J610
1150
BK/WH
1250
BK/WH
X510 9
X610 9
1150
BK
1250
BK
G300
G320

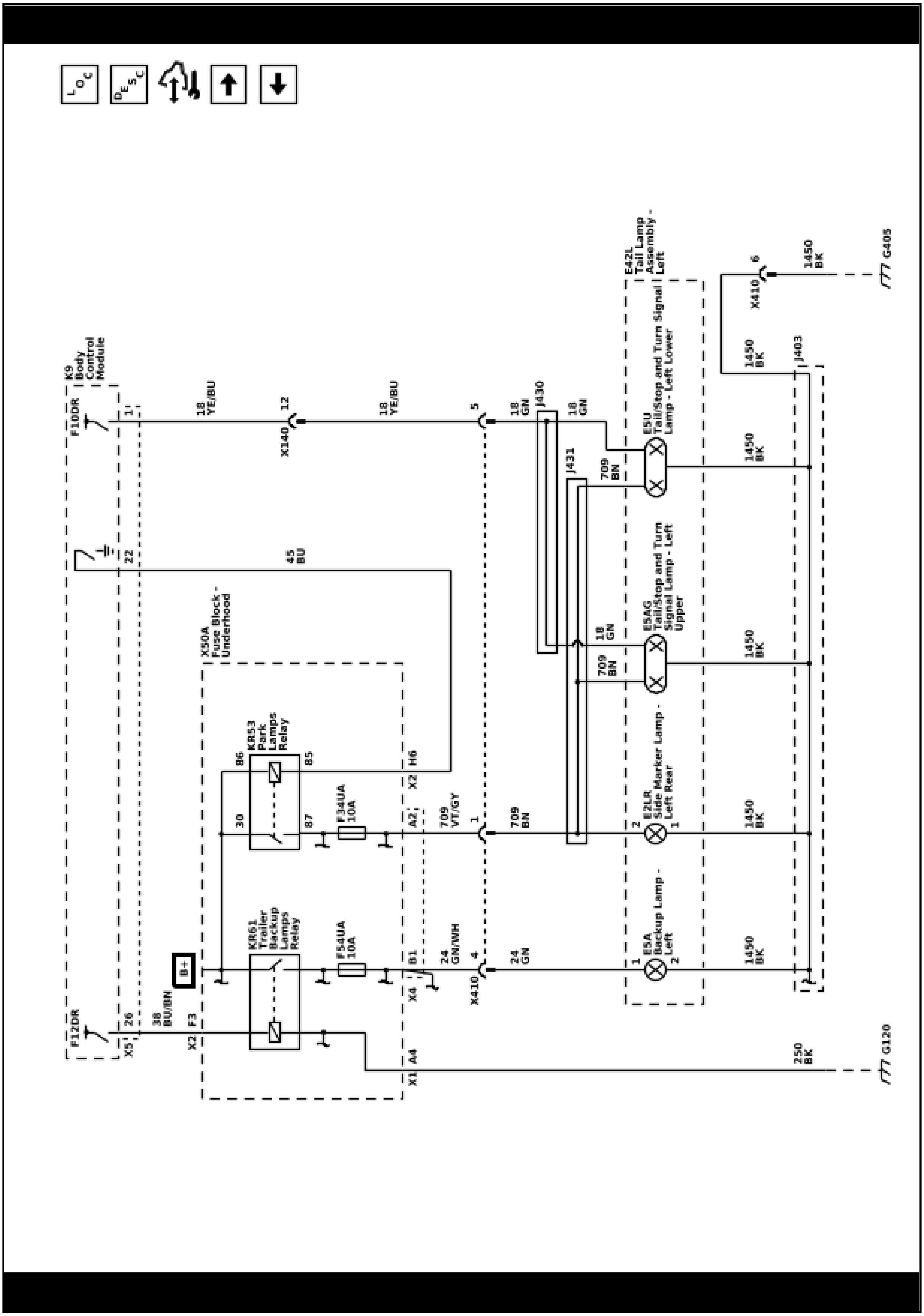
5995366

Exterior Lights Schematics (Mirrors (DWI/DLF/DZC))

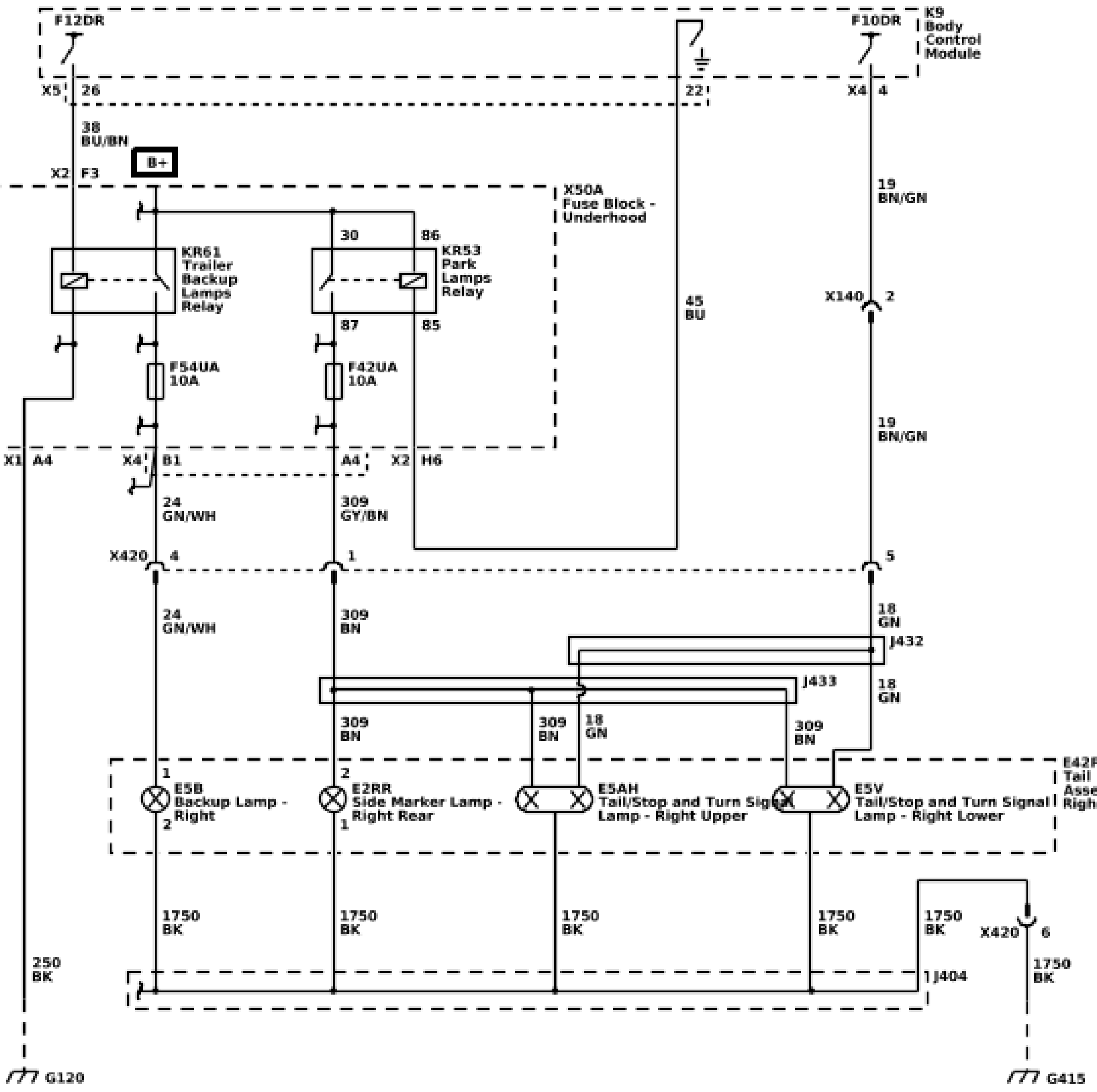

K9 Body Control Module
X7 5
8
X4 9
X7 17
DLF/DZC
DWI/DZC
DWI/DZC
DLF/DZC
2082 BU
5996 GY/GN
968 WH/VT
X500 9
27
4
968 WH/VT
5996 GY/GN
2082 BU
X600 4
27
9
X510 11
5
13
X610 13
5
11
A9A Outside Rearview Mirror - Driver
A9B Outside Rearview Mirror - Passenger
2082 OG
5996 OG/WH
968 YE/BK
2
1
E90DF Exterior Flood Lamp - Driver Outside Rearview Mirror Forward
E90DL Exterior Flood Lamp - Driver Outside Rearview Mirror Lower
E70D Outside Rearview Mirror Cargo Lamp - Driver
E70P Outside Rearview Mirror Cargo Lamp - Passenger
E90PL Exterior Flood Lamp - Passenger Outside Rearview Mirror Lower
E90PF Exterior Flood Lamp - Passenger Outside Rearview Mirror Forward
1150 BK/WH
1250 BK/WH
J510
J610
X510 9
X610 9
1150 BK
1250 BK
G300
G320

5995367

Exterior Lights Schematics (Tail Lamp Assembly - Left (GF3/GF5 with SRW))

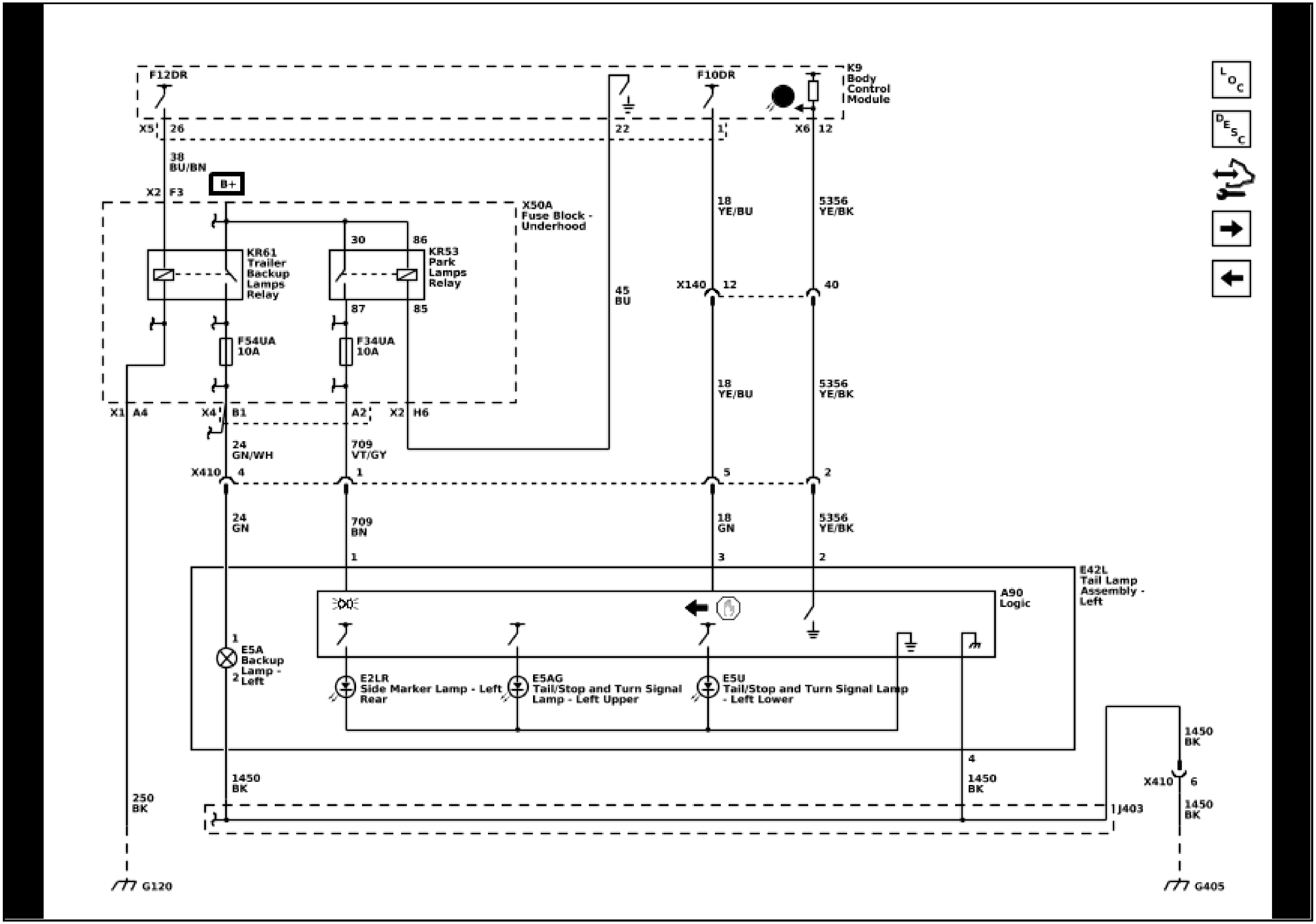

5995368
B+
K9 Body Control Module
F10DR
1
F12DR
26
X5
22
18 YE/BU
12
X140
18 YE/BU
5
45 BU
38 BU/BN
X2
F3
X50A Fuse Block - Underhood
KR53 Park Lamps Relay
86
85
30
87
F34UA 10A
X2 H6
A2
KR61 Trailer Backup Lamps Relay
F54UA 10A
B1
X4
X1 A4
709 VT/GY
1
24 GN/WH
4
X410
709 BN
24 GN
18 GN
J430
18 GN
J431
709 BN
E42L Tail Lamp Assembly - Left
E5U Tail/Stop and Turn Signal Lamp - Left Lower
E5AG Tail/Stop and Turn Signal Lamp - Left Upper
18 GN
709 BN
E2LR Side Marker Lamp - Left Rear
2
1
E5A Backup Lamp - Left
1
2
1450 BK
1450 BK
1450 BK
1450 BK
1450 BK
J403
X410
6
1450 BK
G405
250 BK
G120

Exterior Lights Schematics (Tail Lamp Assembly - Right (GF3/GF5 with SRW))

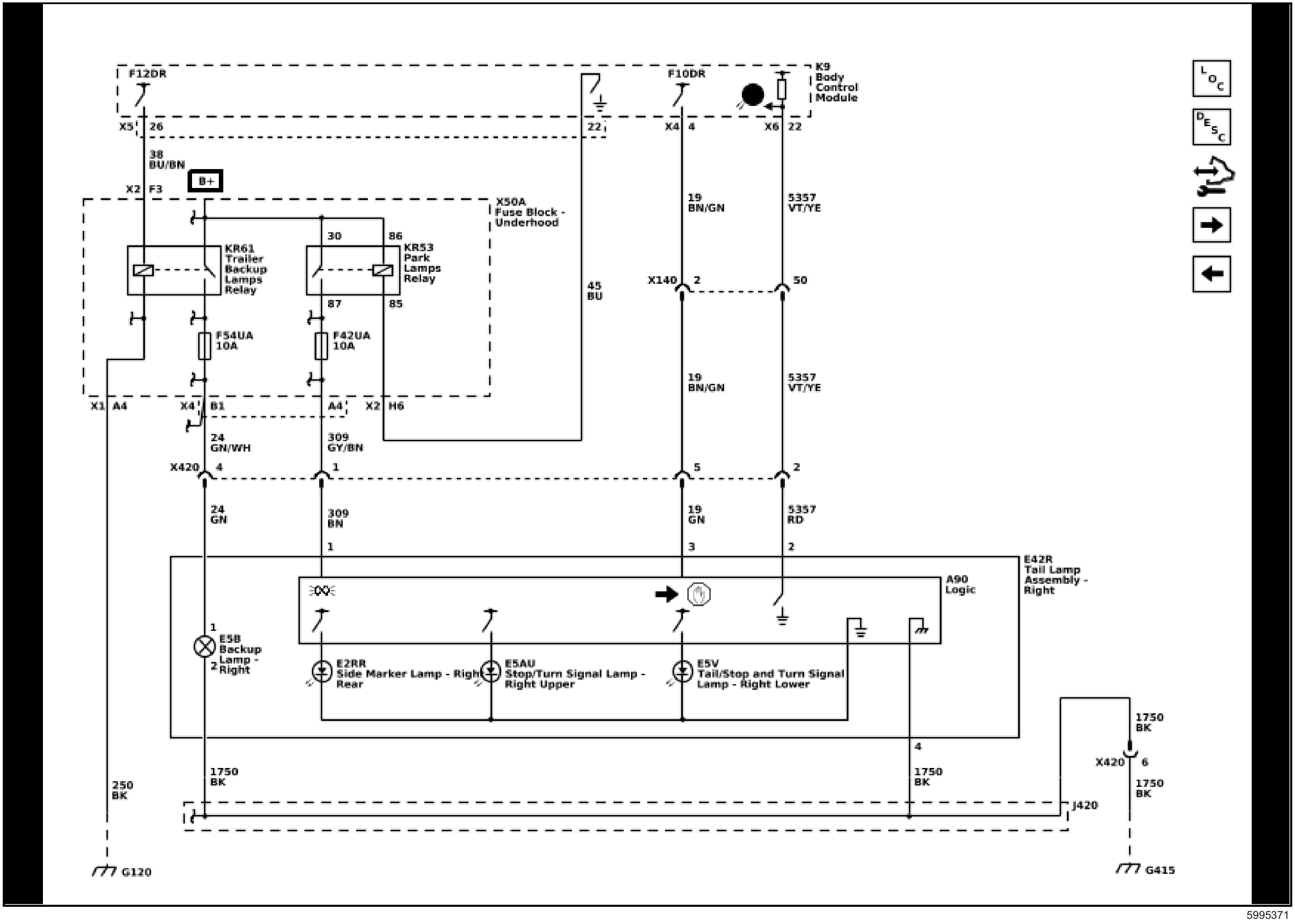

K9 Body Control Module
F12DR
F10DR
X5 26
22
X4 4
38 BU/BN
B+
X2 F3
X50A Fuse Block - Underhood
KR61 Trailer Backup Lamps Relay
30
86
KR53 Park Lamps Relay
87
85
F54UA 10A
F42UA 10A
45 BU
19 BN/GN
X140 2
X1 A4
X4 B1
A4
X2 H6
24 GN/WH
309 GY/BN
X420 4
1
5
24 GN/WH
309 BN
18 GN
J432
J433
309 BN
18 GN
E42R Tail Lamp Assembly - Right
E5B Backup Lamp - Right
E2RR Side Marker Lamp - Right Rear
E5AH Tail/Stop and Turn Signal Lamp - Right Upper
E5V Tail/Stop and Turn Signal Lamp - Right Lower
2
1750 BK
X420 6
250 BK
J404
G120
G415

5995369

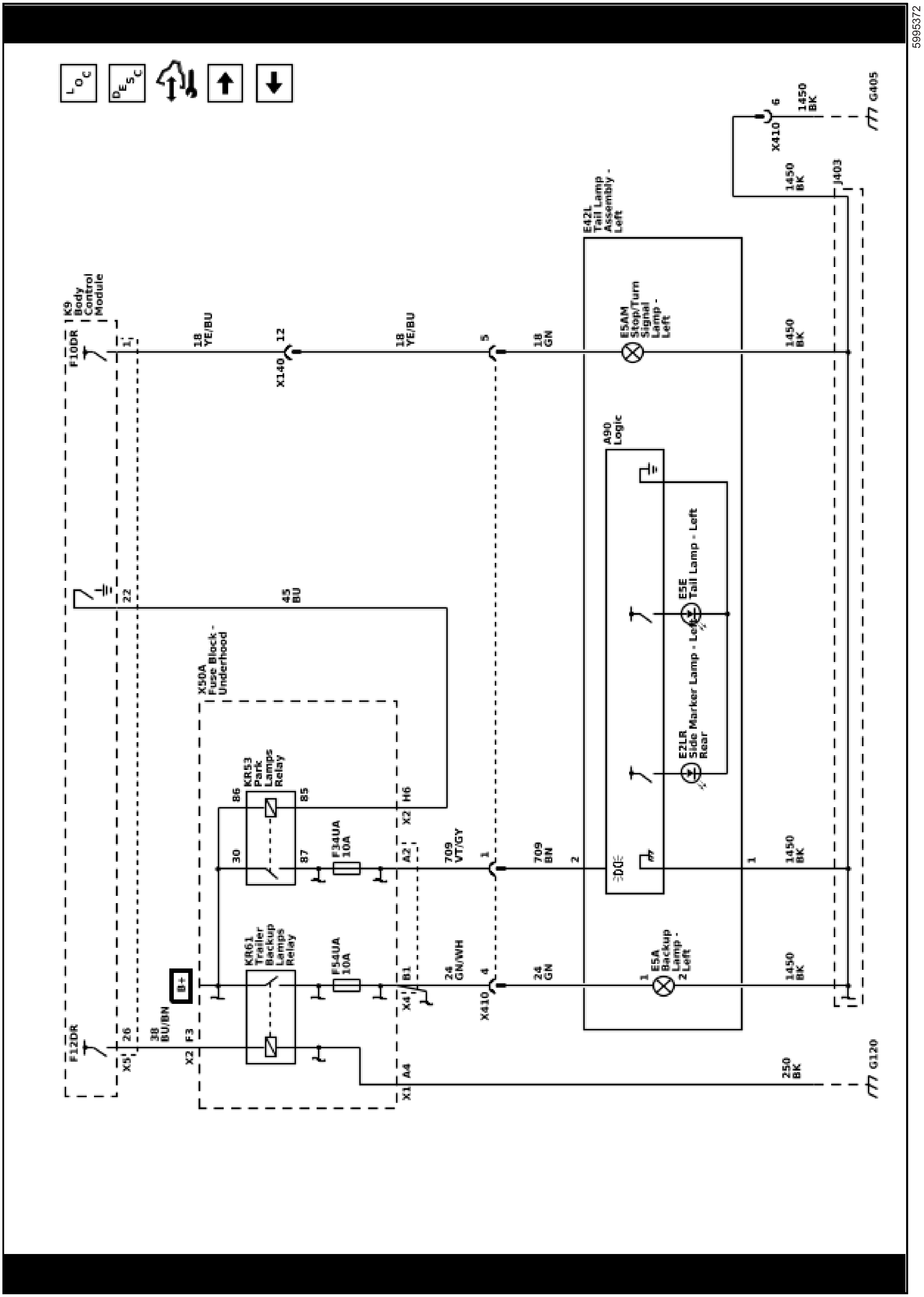
Exterior Lights Schematics (Tail Lamp Assembly - Left (X88 with DZW or GF2/GF9/GFD with SRW))


F12DR
F10DR
K9
Body
Control
Module
X5 26
22
1
X6 12
38
BU/BN
B+
X2 F3
X50A
Fuse Block -
Underhood
18
YE/BU
5356
YE/BK
30
86
KR61
Trailer
Backup
Lamps
Relay
KR53
Park
Lamps
Relay
45
BU
X140 12
40
87
85
F54UA
10A
F34UA
10A
X1 A4
X4 B1
A2
X2 H6
24
GN/WH
709
VT/GY
X410 4
1
5
2
24
GN
709
BN
18
GN
5356
YE/BK
1
3
2
E42L
Tail Lamp
Assembly -
Left
A90
Logic
1
E5A
Backup
Lamp -
Left
2
E2LR
Side Marker Lamp - Left
Rear
E5AG
Tail/Stop and Turn Signal
Lamp - Left Upper
E5U
Tail/Stop and Turn Signal Lamp
- Left Lower
4
1450
BK
250
BK
1450
BK
J403
1450
BK
X410 6
1450
BK
G120
G405
5995370

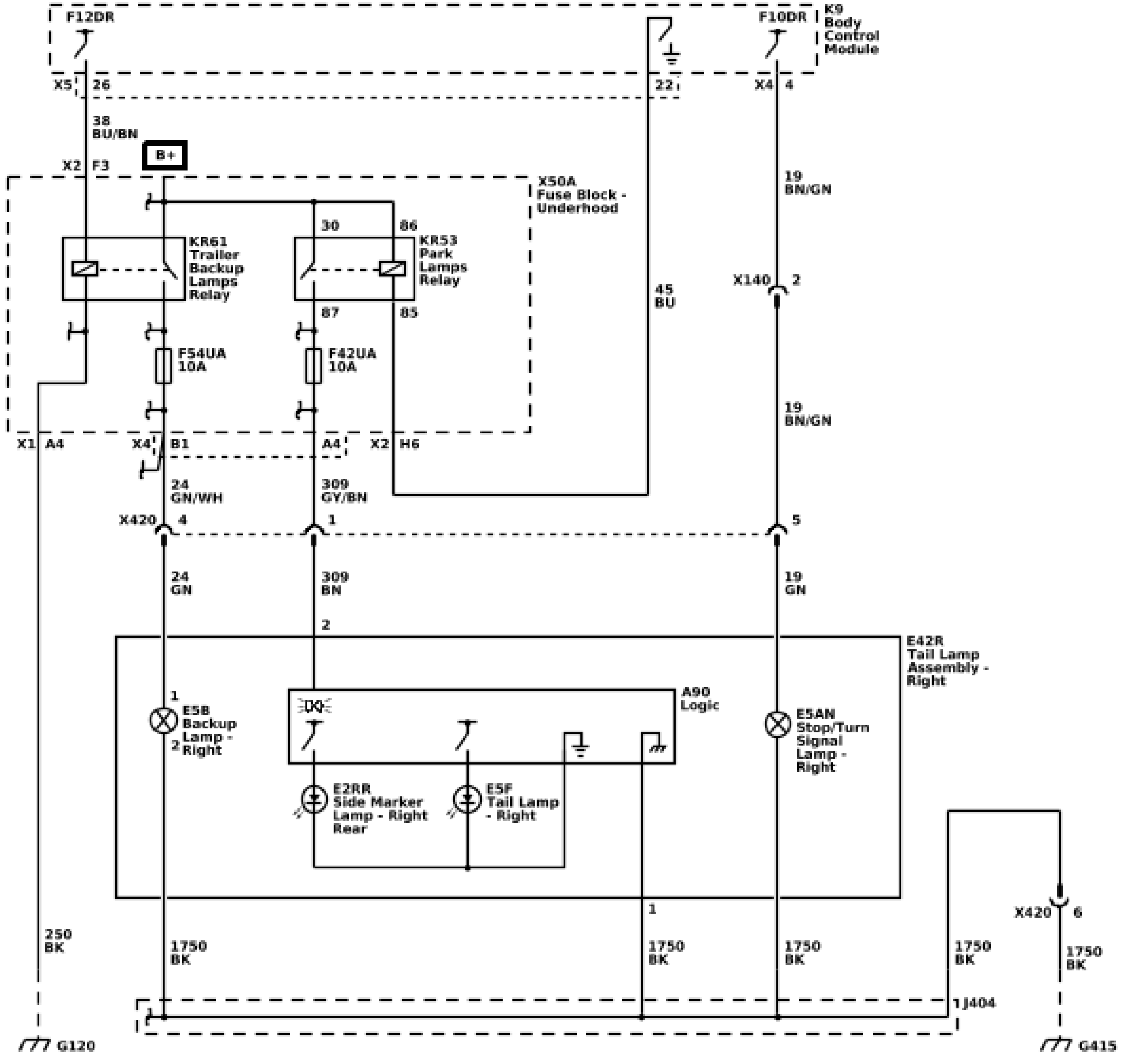
Exterior Lights Schematics (Tail Lamp Assembly - Right (X88 with DZW or GF2/GF9/GFD with SRW))


F12DR
F10DR
K9
Body
Control
Module
X5 26
22
X4 4
X6 22
38
BU/BN
B+
X2 F3
X50A
Fuse Block -
Underhood
KR61
Trailer
Backup
Lamps
Relay
30
86
KR53
Park
Lamps
Relay
87
85
F54UA
10A
F42UA
10A
45
BU
19
BN/GN
5357
VT/YE
X140 2
50
X1 A4
X4 B1
A4
X2 H6
24
GN/WH
309
GY/BN
X420 4
1
5
2
24
GN
309
BN
19
GN
5357
RD
1
3
2
E42R
Tail Lamp
Assembly -
Right
A90
Logic
1
E58
Backup
Lamp -
2 Right
E2RR
Side Marker Lamp - Right
Rear
E5AU
Stop/Turn Signal Lamp -
Right Upper
E5V
Tail/Stop and Turn Signal
Lamp - Right Lower
4
1750
BK
X420 6
250
BK
J420
G120
G415
5995371

Exterior Lights Schematics (Tail Lamp Assembly - Left (GFF/GFI with SRW))

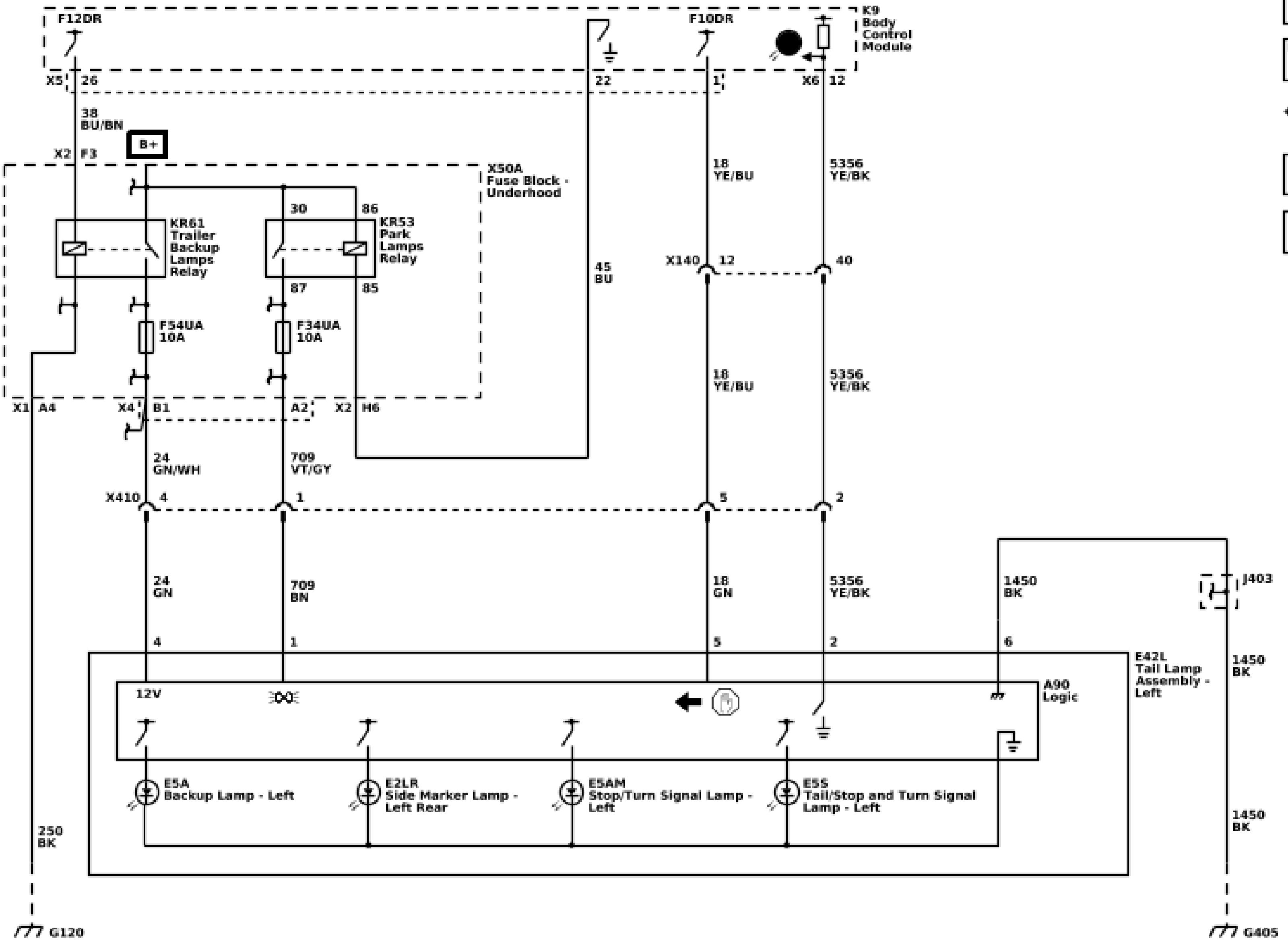

5995372
K9 Body Control Module
F10DR
X5 1
18 YE/BU
X140 12
18 YE/BU
5
18 GN
E5AM Stop/Turn Signal Lamp - Left
1450 BK
E42L Tail Lamp Assembly - Left
1450 BK
J403
X410 6
1450 BK
G405
22
45 BU
A90 Logic
E5E Tail Lamp - Left
E2LR Side Marker Lamp - Left Rear
X50A Fuse Block - Underhood
86
KR53 Park Lamps Relay
85
X2 H6
30
87
F34UA 10A
X2 A2
709 VT/GY
1
709 BN
2
1
1450 BK
B+
KR61 Trailer Backup Lamps Relay
F54UA 10A
X4 B1
24 GN/WH
X410 4
24 GN
1
E5A Backup Lamp - Left
2
1450 BK
F12DR
X5 26
38 BU/BN
X2 F3
X1 A4
250 BK
G120

Exterior Lights Schematics (Tail Lamp Assembly - Right (GFF/GFI with SRW))


F12DR
F10DR
K9 Body Control Module
X5 26
22
X4 4
38 BU/BN
B+
X2 F3
X50A Fuse Block - Underhood
30
86
KR61 Trailer Backup Lamps Relay
KR53 Park Lamps Relay
87
85
F54UA 10A
F42UA 10A
45 BU
19 BN/GN
X140 2
X1 A4
X4 B1
A4
X2 H6
24 GN/WH
309 GY/BN
X420 4
1
5
24 GN
309 BN
19 GN
2
E42R Tail Lamp Assembly - Right
1
E5B Backup Lamp - Right
2
A90 Logic
E5AN Stop/Turn Signal Lamp - Right
E2RR Side Marker Lamp - Right Rear
E5F Tail Lamp - Right
1
X420 6
250 BK
1750 BK
1750 BK
1750 BK
1750 BK
1750 BK
J404
G120
G415

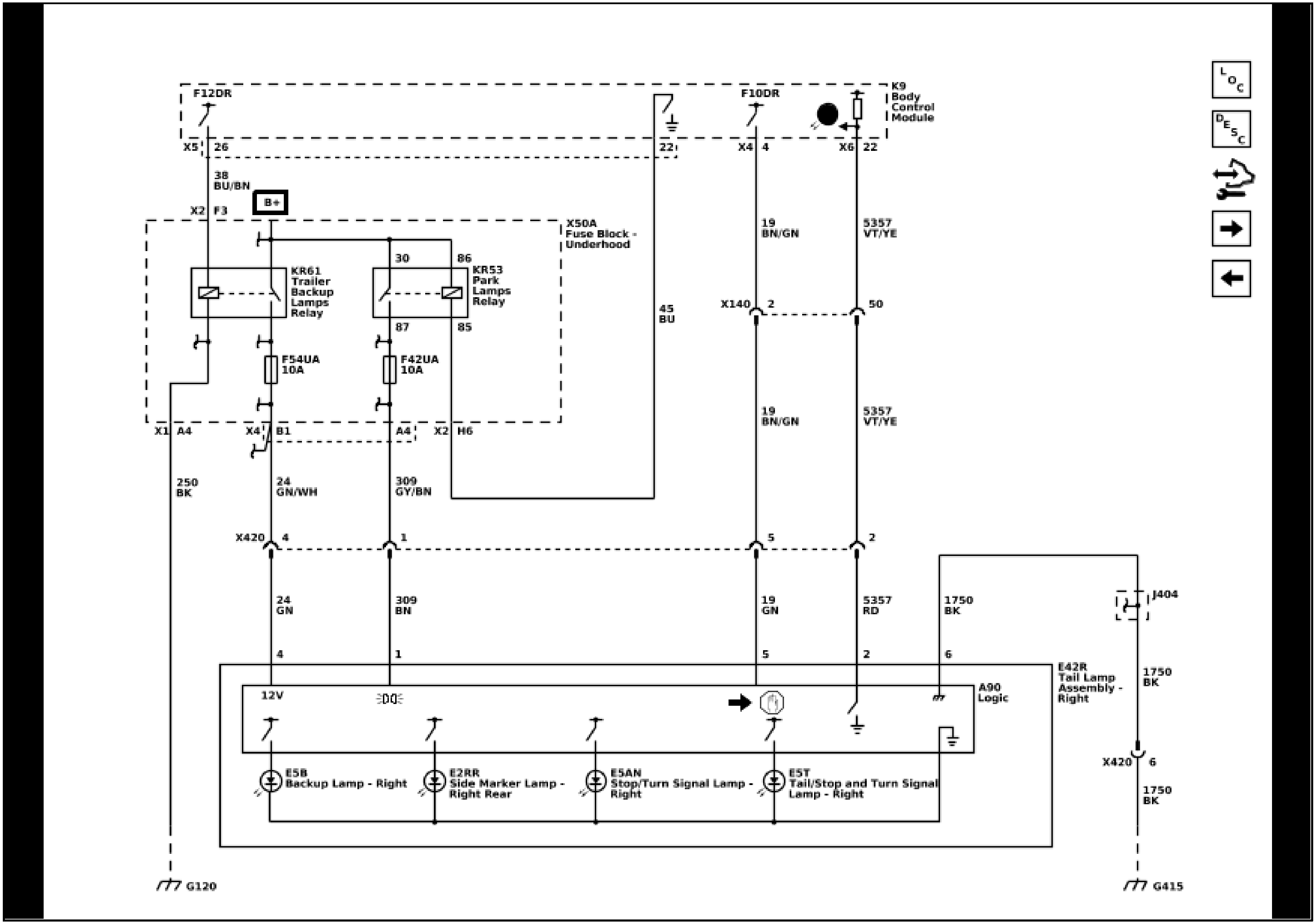
5995373

Exterior Lights Schematics (Tail Lamp Assembly - Left (Z88 with DZW or GFU/GFG/GFW with SRW))


F12DR
F10DR
K9
Body
Control
Module
X5 26
22
1
X6 12
38
BU/BN
X2 F3
B+
X50A
Fuse Block -
Underhood
30
86
KR61
Trailer
Backup
Lamps
Relay
KR53
Park
Lamps
Relay
87
85
F54UA
10A
F34UA
10A
45
BU
18
YE/BU
5356
YE/BK
X140 12
40
X1 A4
X4 B1
A2
X2 H6
24
GN/WH
709
VT/GY
X410 4
1
5
2
24
GN
709
BN
18
GN
1450
BK
J403
4
1
5
2
6
E42L
Tail Lamp
Assembly -
Left
12V
A90
Logic
E5A
Backup Lamp - Left
E2LR
Side Marker Lamp -
Left Rear
E5AM
Stop/Turn Signal Lamp -
Left
E55
Tail/Stop and Turn Signal
Lamp - Left
250
BK
G120
G405

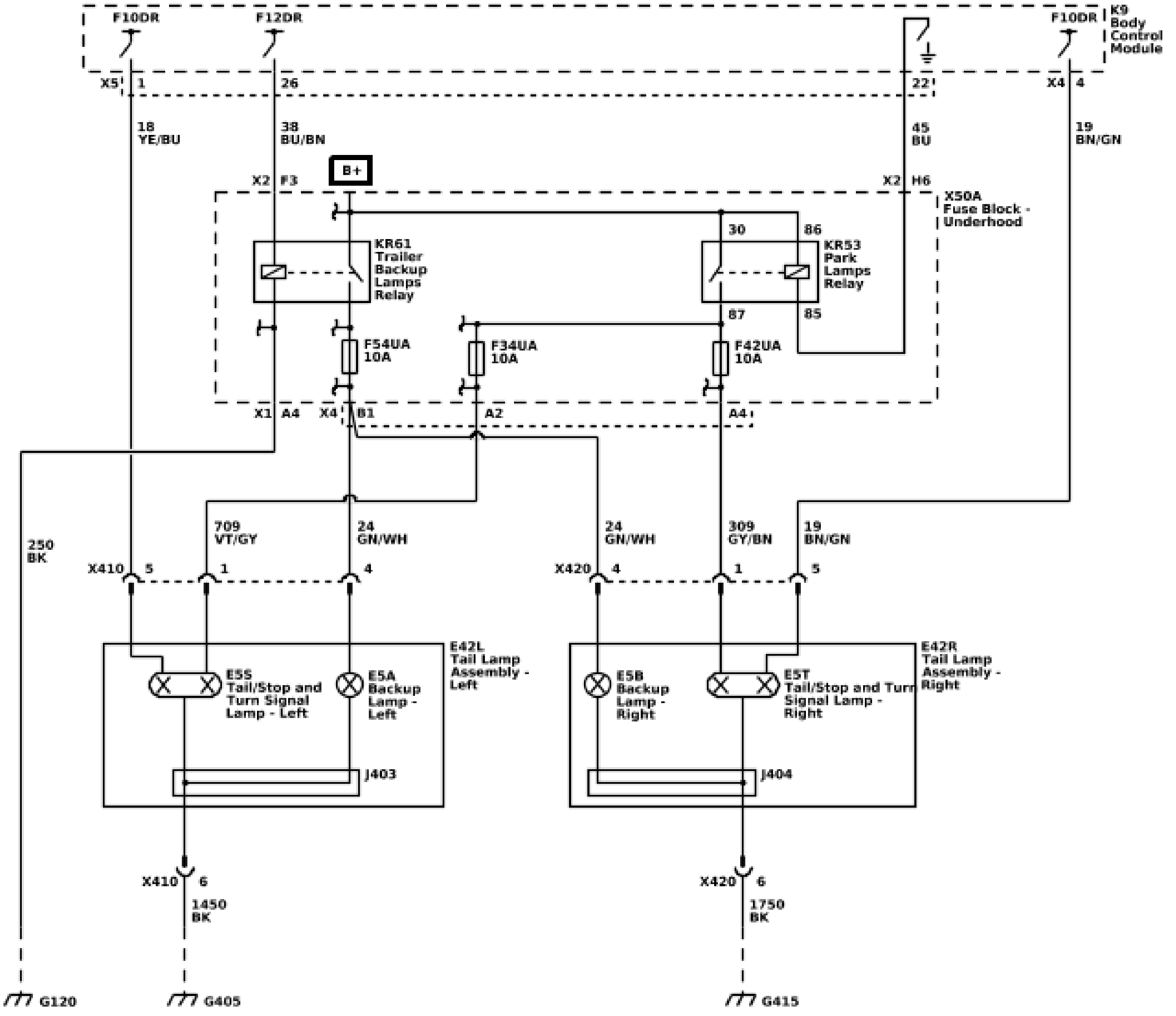
5995374

Exterior Lights Schematics (Tail Lamp Assembly - Right (Z88 with DZW or GFU/GFG/GFW with SRW))

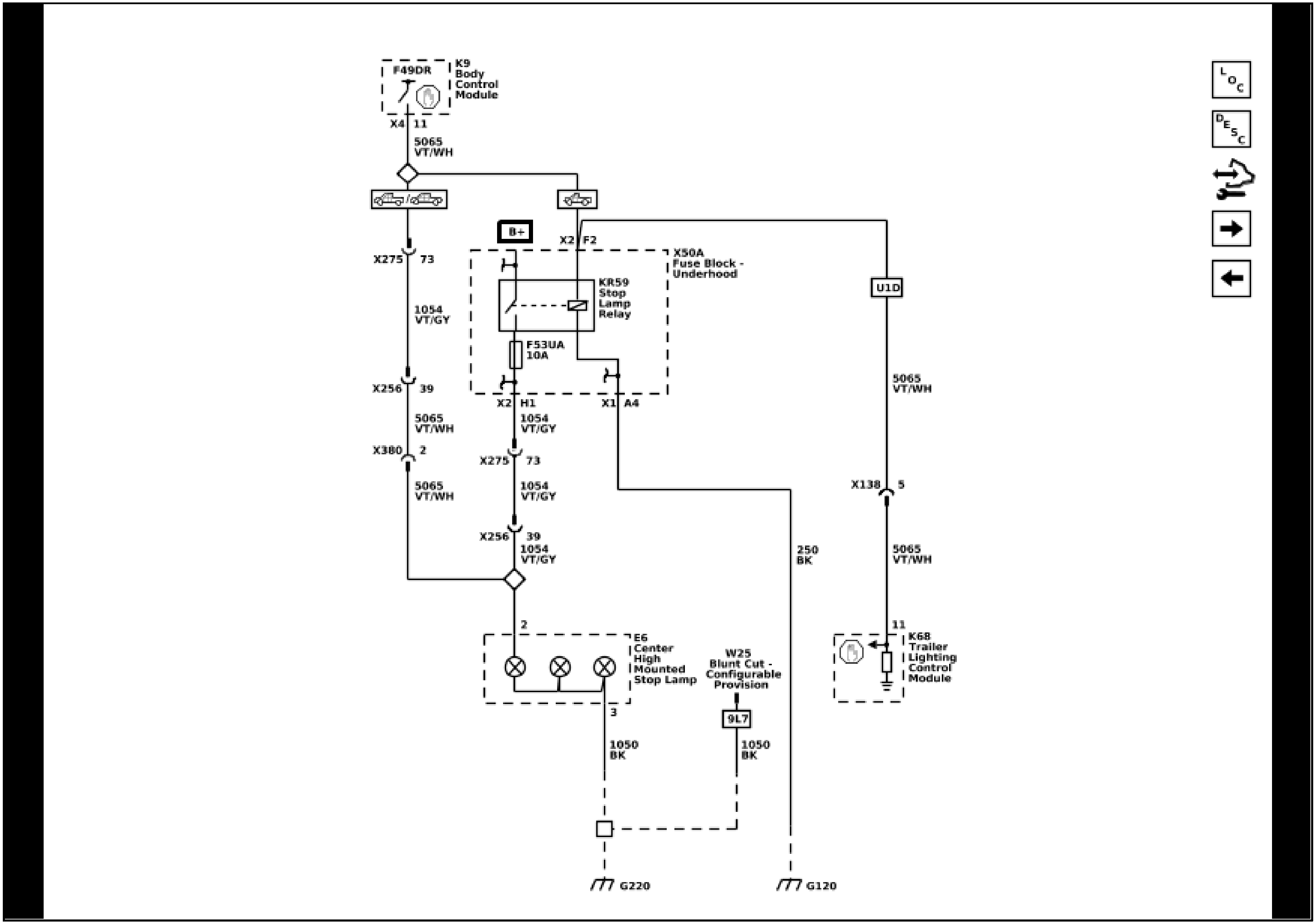

K9 Body Control Module
F12DR
F10DR
X5 26
22
X4 4
X6 22
38 BU/BN
X2 F3
B+
X50A Fuse Block - Underhood
KR61 Trailer Backup Lamps Relay
30
86
KR53 Park Lamps Relay
87
85
F54UA 10A
F42UA 10A
X1 A4
X4 B1
A4
X2 H6
45 BU
19 BN/GN
5357 VT/YE
X140 2
50
250 BK
24 GN/WH
309 GY/BN
X420 4
1
5
2
24 GN
309 BN
19 GN
5357 RD
1750 BK
J404
6
E42R Tail Lamp Assembly - Right
A90 Logic
12V
E5B Backup Lamp - Right
E2RR Side Marker Lamp - Right Rear
E5AN Stop/Turn Signal Lamp - Right
E5T Tail/Stop and Turn Signal Lamp - Right
X420 6
G120
G415

5995375

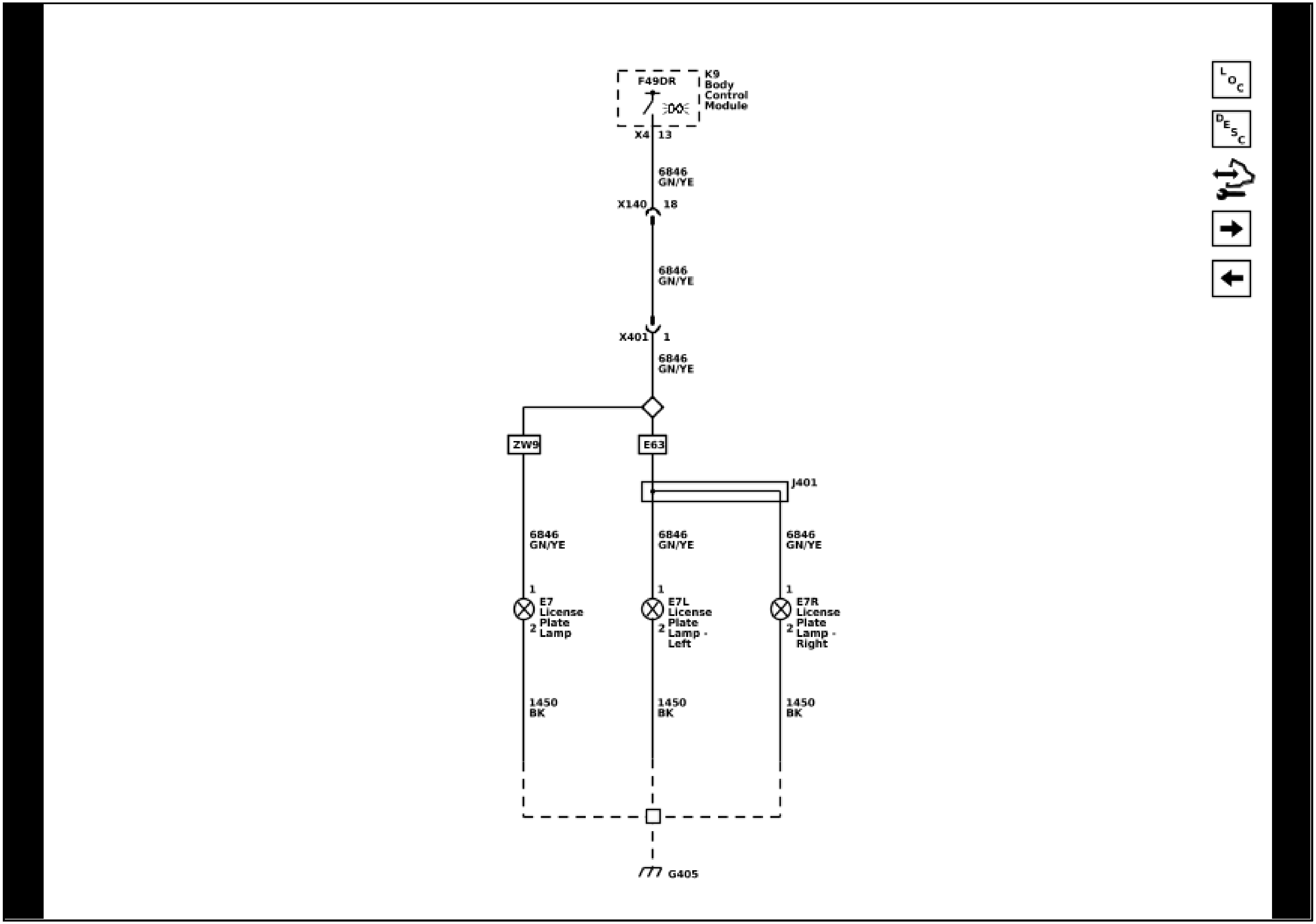
Exterior Lights Schematics (Tail Lamp Assemblies (ZW9))


F10DR
F12DR
F10DR
K9 Body Control Module
X5 1
26
22
X4 4
18 YE/BU
38 BU/BN
45 BU
19 BN/GN
B+
X2 F3
X2 H6
X50A Fuse Block - Underhood
KR61 Trailer Backup Lamps Relay
30
86
KR53 Park Lamps Relay
87
85
F54UA 10A
F34UA 10A
F42UA 10A
X1 A4
X4 B1
A2
A4
250 BK
709 VT/GY
24 GN/WH
24 GN/WH
309 GY/BN
19 BN/GN
X410 5
1
4
X420 4
1
5
E42L Tail Lamp Assembly - Left
E5S Tail/Stop and Turn Signal Lamp - Left
E5A Backup Lamp - Left
E5B Backup Lamp - Right
E5T Tail/Stop and Turn Signal Lamp - Right
E42R Tail Lamp Assembly - Right
J403
J404
X410 6
1450 BK
X420 6
1750 BK
G120
G405
G415
5995376

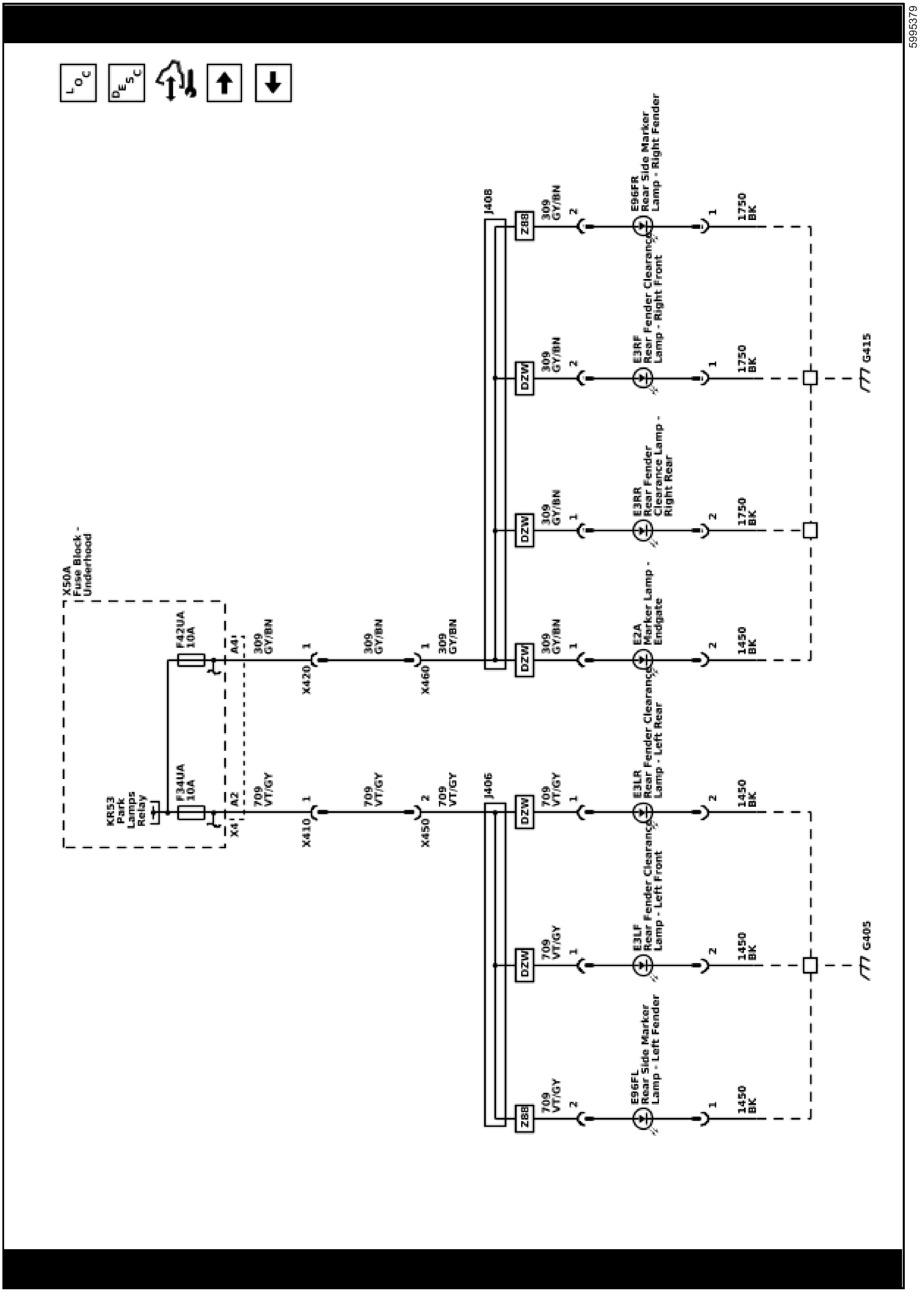
Exterior Lights Schematics (Center High Mounted Stop Lamp)


F49DR
K9 Body Control Module
X4 11
5065 VT/WH
B+
X2 F2
X50A Fuse Block - Underhood
KR59 Stop Lamp Relay
F53UA 10A
X2 H1
X1 A4
U1D
X275 73
1054 VT/GY
X256 39
5065 VT/WH
X380 2
5065 VT/WH
1054 VT/GY
X275 73
1054 VT/GY
X256 39
1054 VT/GY
250 BK
X138 5
5065 VT/WH
5065 VT/WH
11
K68 Trailer Lighting Control Module
2
E6 Center High Mounted Stop Lamp
W25 Blunt Cut - Configurable Provision
3
9L7
1050 BK
1050 BK
G220
G120
5995377

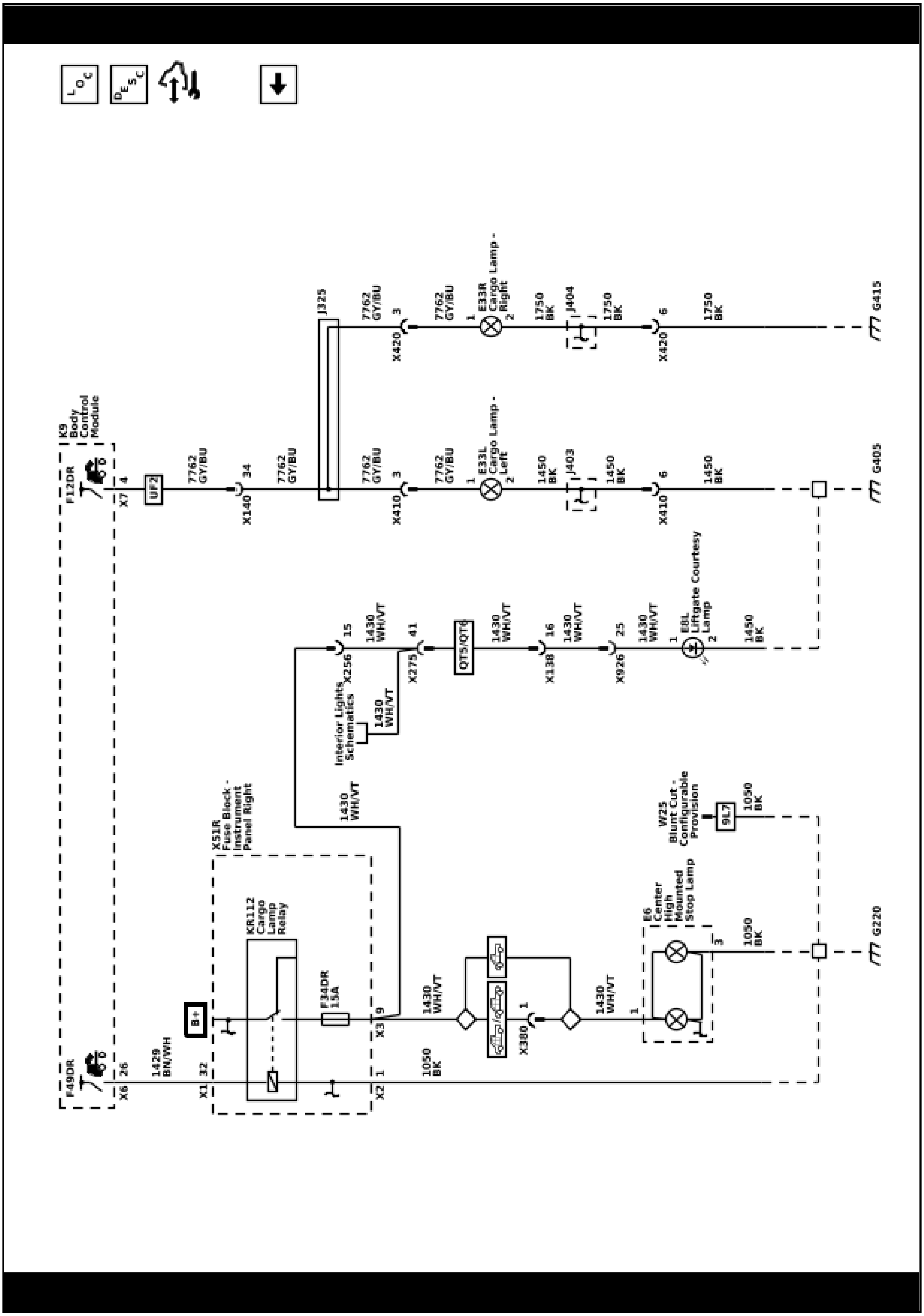
Exterior Lights Schematics (License Plate Lamps)


F49DR
K9
Body
Control
Module
X4 13
6846
GN/YE
X140 18
6846
GN/YE
X401 1
6846
GN/YE
ZW9
E63
J401
6846
GN/YE
6846
GN/YE
6846
GN/YE
1
E7
License
Plate
2 Lamp
1
E7L
License
Plate
2 Lamp -
Left
1
E7R
License
Plate
2 Lamp -
Right
1450
BK
1450
BK
1450
BK
G405
5995378

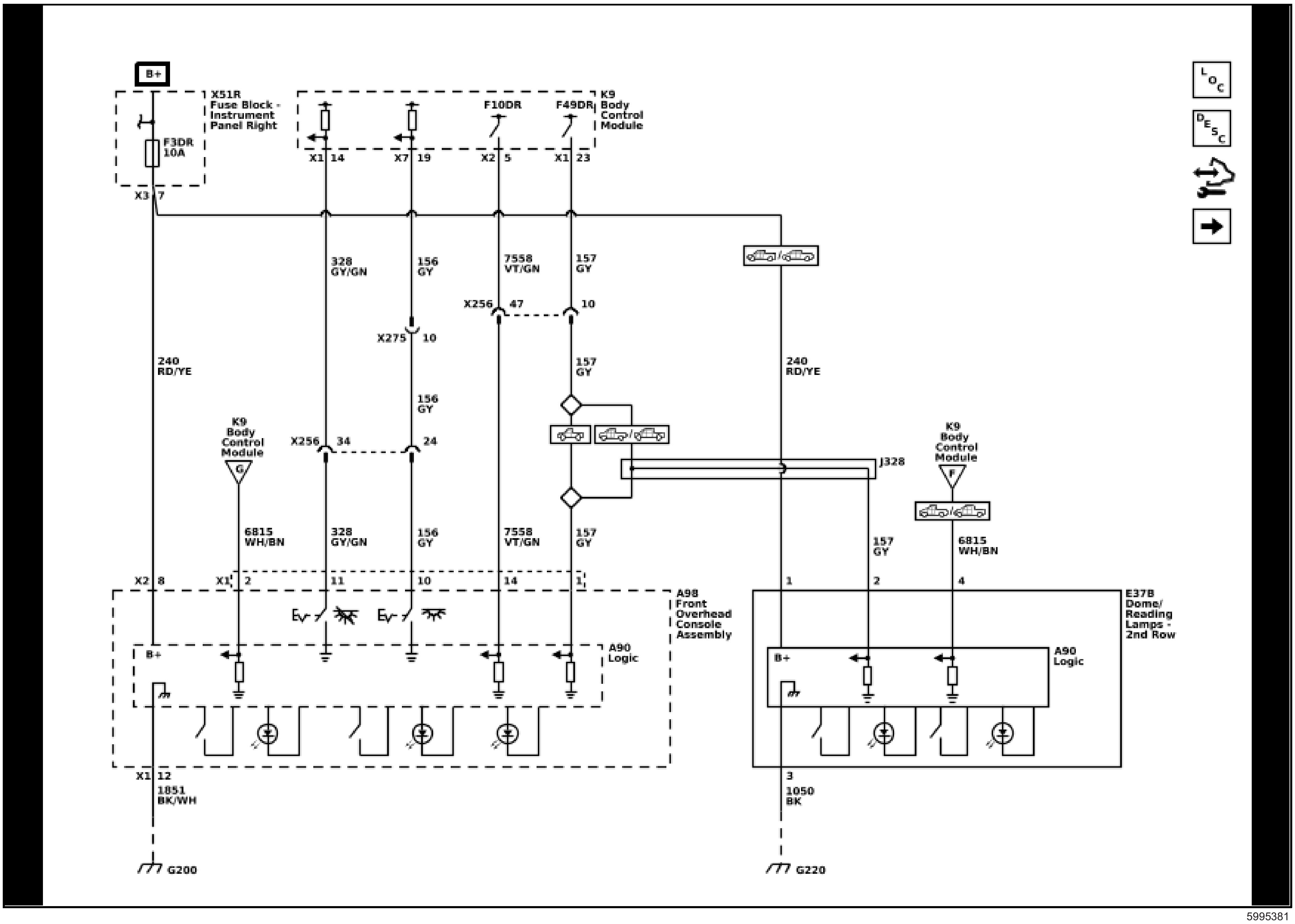
Exterior Lights Schematics (Park Lamps - Rear Clearance)


5995379
X50A
Fuse Block - Underhood
KR53
Park Lamps Relay
F34UA
10A
F42UA
10A
X4
A2
A4
709
VT/GY
309
GY/BN
X410
X420
X450
X460
1
2
J406
J408
DZW
Z88
E96FL
Rear Side Marker Lamp - Left Fender
E3LF
Rear Fender Clearance Lamp - Left Front
E3LR
Rear Fender Clearance Lamp - Left Rear
E2A
Marker Lamp - Endgate
E3RR
Rear Fender Clearance Lamp - Right Rear
E3RF
Rear Fender Clearance Lamp - Right Front
E96FR
Rear Side Marker Lamp - Right Fender
1450
BK
1750
BK
G405
G415

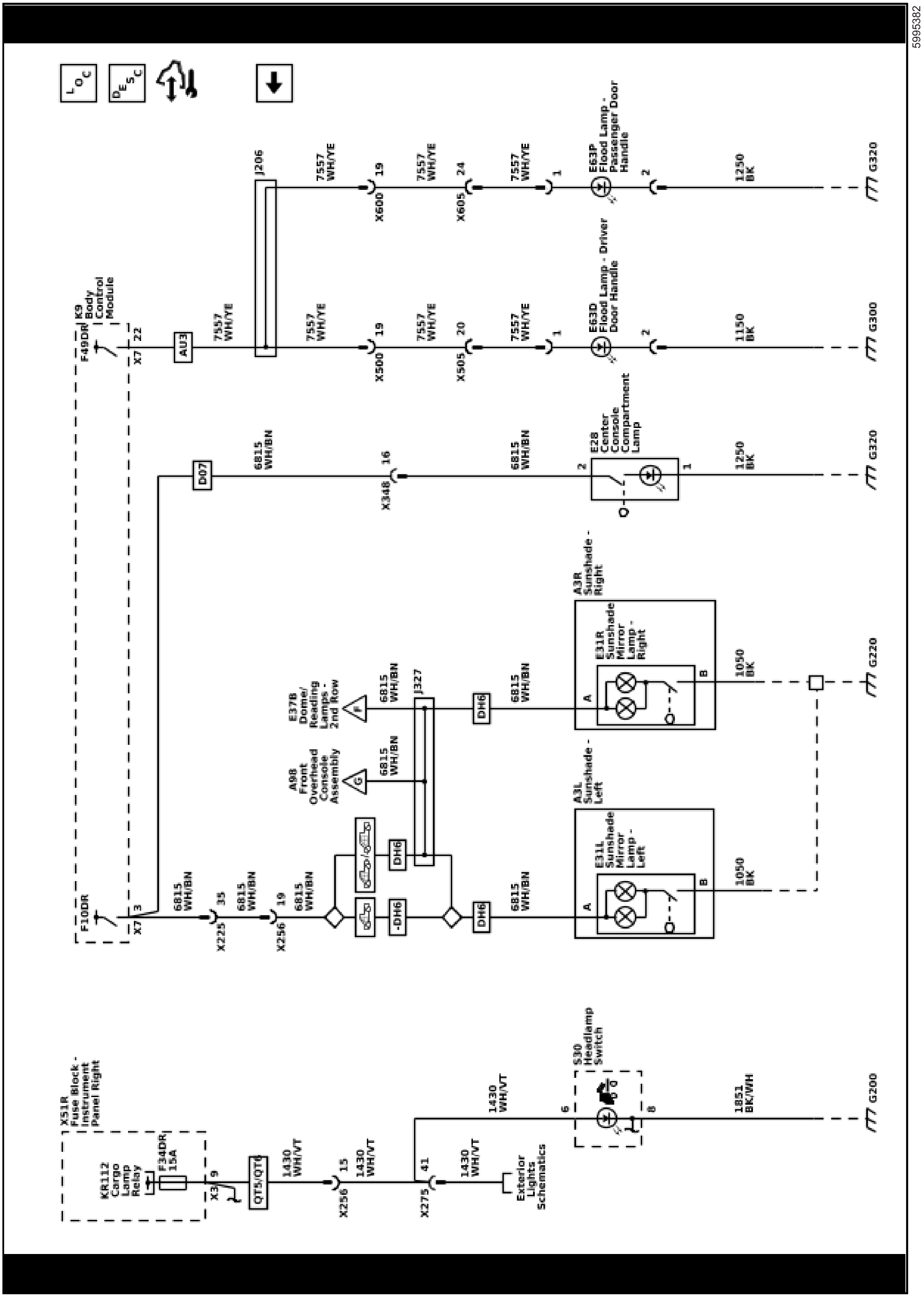
Exterior Lights Schematics (Cargo Lamps)


5995380
K9 Body Control Module
F12DR
X7 4
UF2
7762 GY/BU
X140 34
J325
X410 3
E33L Cargo Lamp - Left
1 2
1450 BK
J403
X410 6
G405
X420 3
E33R Cargo Lamp - Right
1750 BK
J404
X420 6
G415
F49DR
X6 26
1429 BN/WH
X1 32
B+
X51R Fuse Block - Instrument Panel Right
KR112 Cargo Lamp Relay
F34DR 15A
X3 9
X2 1
1050 BK
1430 WH/VT
X380 1
E6 Center High Mounted Stop Lamp
3
W25 Blunt Cut - Configurable Provision
9L7
G220
Interior Lights Schematics
X256 15
X275 41
QT5/QT6
X138 16
X926 25
E8L Liftgate Courtesy Lamp

Interior Lights Schematics (Controls and Overhead Lamps)


B+
X51R
Fuse Block - Instrument Panel Right
F3DR
10A
X3 7
K9
Body Control Module
F10DR
F49DR
X1 14
X7 19
X2 5
X1 23
328
GY/GN
156
GY
7558
VT/GN
157
GY
X256 47
10
X275 10
240
RD/YE
X256 34
24
J328
K9
Body Control Module
G
F
6815
WH/BN
X2 8
X1 2
11
10
14
1
1
2
4
A98
Front Overhead Console Assembly
A90
Logic
B+
E37B
Dome/Reading Lamps - 2nd Row
X1 12
1851
BK/WH
3
1050
BK
G200
G220
5995381

Interior Lights Schematics (Cargo Lamp Indicator, Sunshade, Center Console, and Door Lamps)


5995382
X51R Fuse Block - Instrument Panel Right
KR112 Cargo Lamp Relay
F34DR 15A
X3 9
QT5/QT6
1430 WH/VT
X256 15
1430 WH/VT
X275 41
1430 WH/VT
Exterior Lights Schematics
1430 WH/VT
6
S30 Headlamp Switch
8
1851 BK/WH
G200
F10DR
X7 3
6815 WH/BN
X225 35
6815 WH/BN
X256 19
6815 WH/BN
-DH6
DH6
DH6
J327
A98 Front Overhead Console Assembly
G
6815 WH/BN
E37B Dome/Reading Lamps - 2nd Row
F
6815 WH/BN
DH6
6815 WH/BN
6815 WH/BN
A3L Sunshade - Left
E31L Sunshade Mirror Lamp - Left
A
B
1050 BK
A3R Sunshade - Right
E31R Sunshade Mirror Lamp - Right
A
B
1050 BK
G220
D07
6815 WH/BN
X348 16
6815 WH/BN
2
E28 Center Console Compartment Lamp
1
1250 BK
G320
F49DR
K9 Body Control Module
X7 22
AU3
7557 WH/YE
J206
7557 WH/YE
X500 19
7557 WH/YE
X505 20
7557 WH/YE
1
E63D Flood Lamp - Driver Door Handle
2
1150 BK
G300
7557 WH/YE
X600 19
7557 WH/YE
X605 24
7557 WH/YE
1
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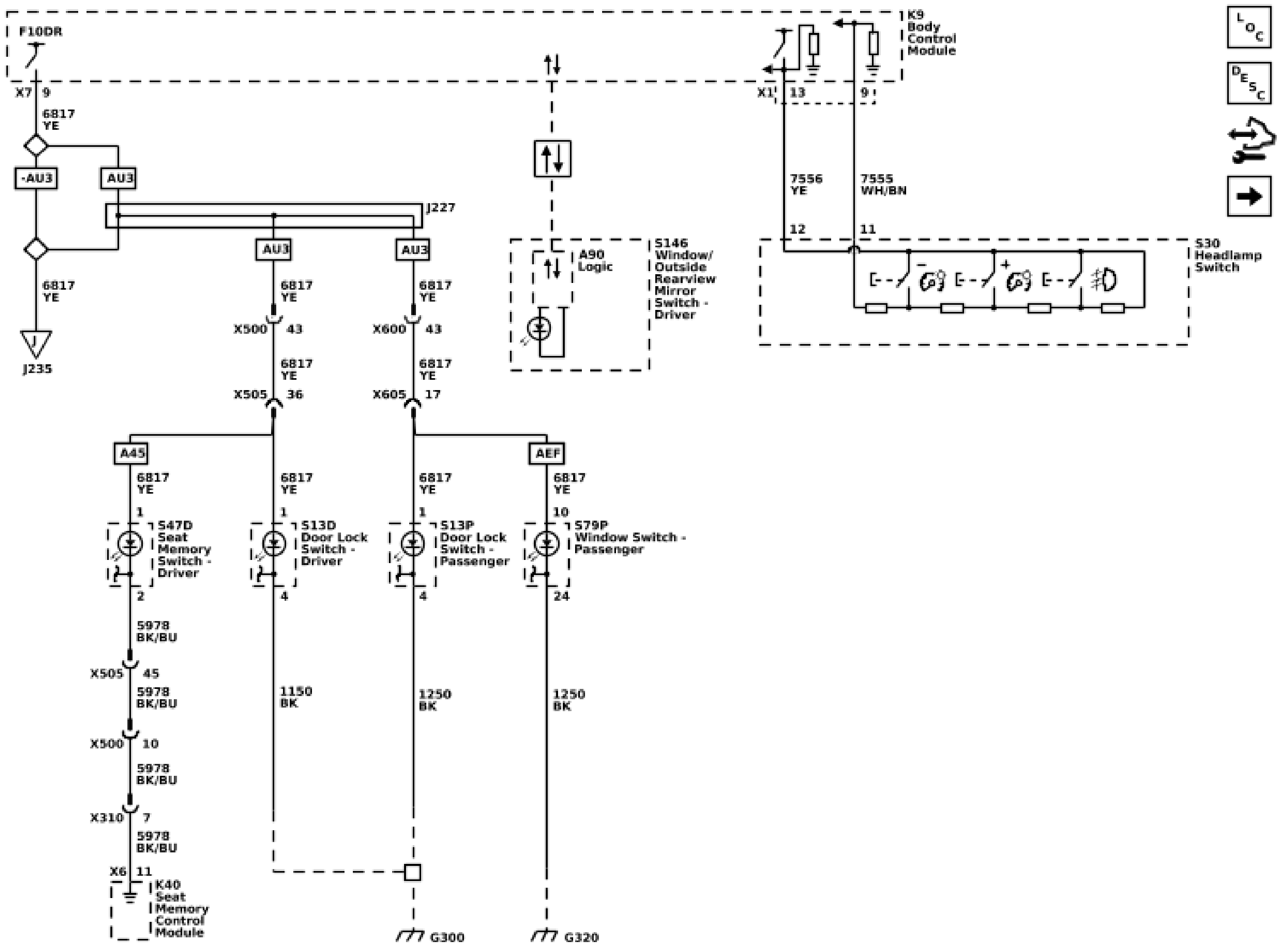
2
1250 BK
G320
LOC
DESC

Interior Lights Dimming Schematics (Controls and Backlights (1 of 2))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Control
Module
X7 9
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YE
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6817
YE
X500 43
6817
YE
X505 36
AU3
6817
YE
X600 43
6817
YE
X605 17
A45
6817
YE
1
S47D
Seat
Memory
Switch -
Driver
2
5978
BK/BU
X505 45
5978
BK/BU
X500 10
5978
BK/BU
X310 7
5978
BK/BU
X6 11
K40
Seat
Memory
Control
Module
6817
YE
1
S13D
Door Lock
Switch -
Driver
4
1150
BK
6817
YE
1
S13P
Door Lock
Switch -
Passenger
4
1250
BK
G300
AEF
6817
YE
10
S79P
Window Switch -
Passenger
24
1250
BK
G320
A90
Logic
S146
Window/
Outside
Rearview
Mirror
Switch -
Driver
X1 13
9
7556
YE
7555
WH/BN
12
11
S30
Headlamp
Switch
–
+
L
O
C
D
E
S
C

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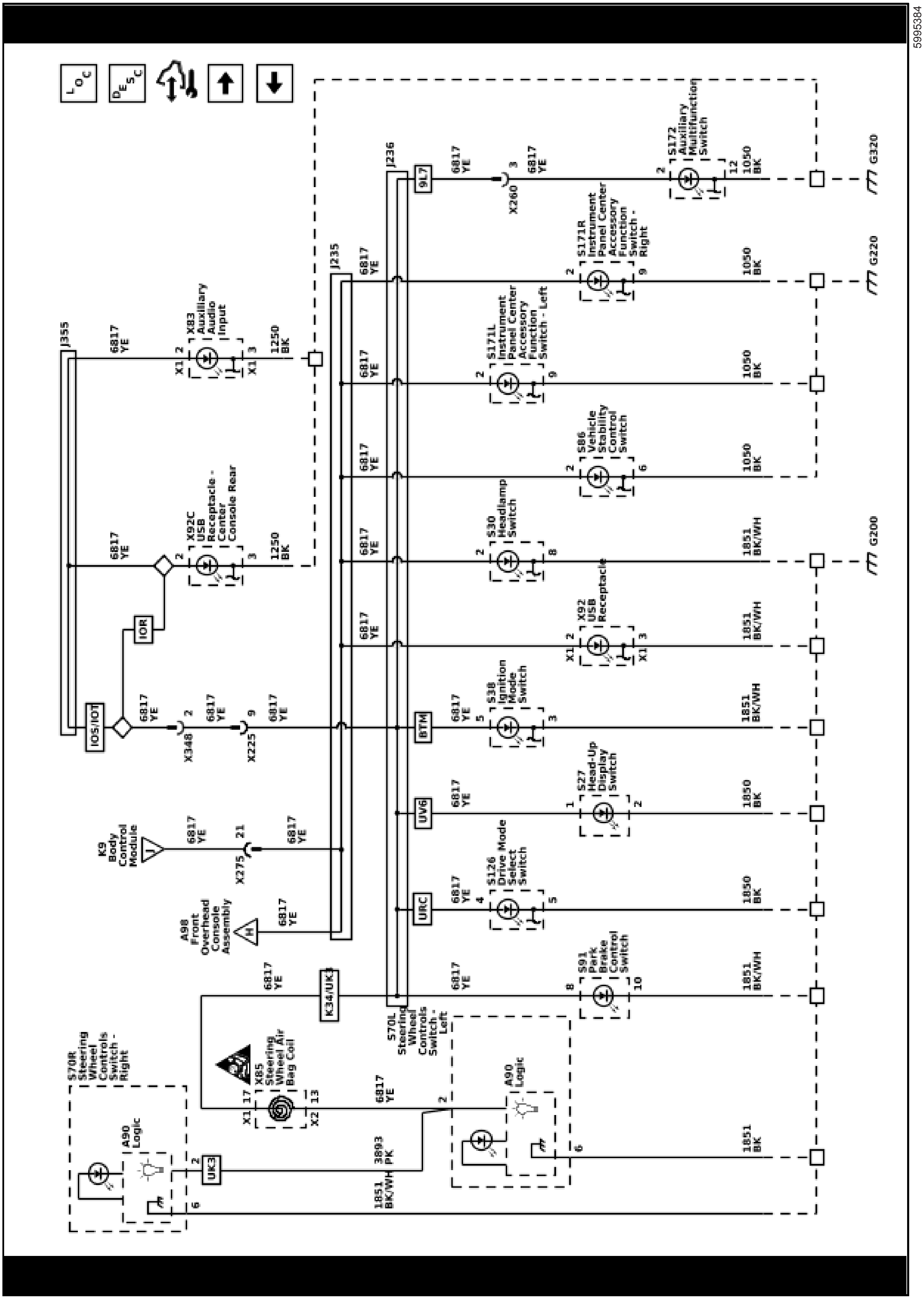
Interior Lights Dimming Schematics (Backlights (2 of 2))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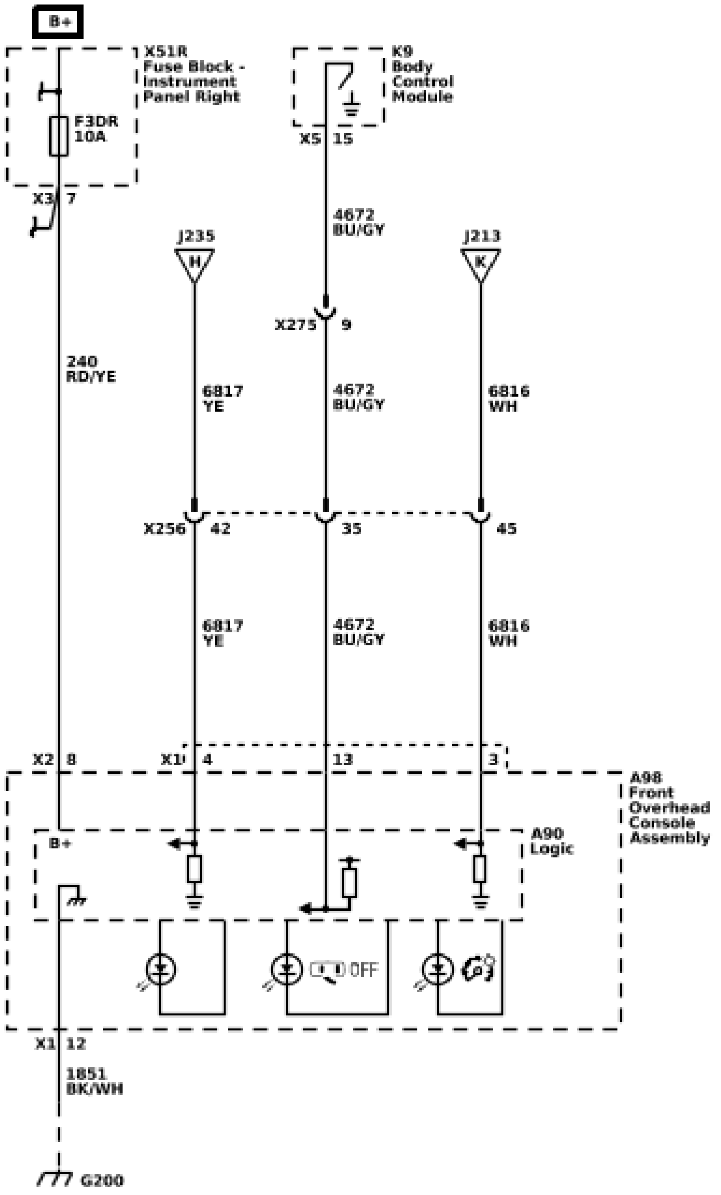
J355
6817 YE
X1 2
X83 Auxiliary Audio Input
X1 3
1250 BK
X92C USB Receptacle - Center Console Rear
IOR
IOS/IOT
X348
X225
K9 Body Control Module
X275
21
A98 Front Overhead Console Assembly
J235
J236
9L7
X260
S172 Auxiliary Multifunction Switch
1050 BK
G320
S171R Instrument Panel Center Accessory Function Switch - Right
G220
S171L Instrument Panel Center Accessory Function Switch - Left
S86 Vehicle Stability Control Switch
S30 Headlamp Switch
1851 BK/WH
G200
X92 USB Receptacle
BTM
S38 Ignition Mode Switch
UV6
S27 Head-Up Display Switch
1850 BK
URC
S126 Drive Mode Select Switch
K34/UK3
S91 Park Brake Control Switch
S70L Steering Wheel Controls Switch - Left
A90 Logic
X85 Steering Wheel Air Bag Coil
X1 17
X2 13
S70R Steering Wheel Controls Switch - Right
UK3
3893 PK
1851 BK
L O C
D E S C

Interior Lights Dimming Schematics (Front Overhead Console Assembly)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X51R
Fuse Block - Instrument Panel Right
F3DR
10A
X3 7
240
RD/YE
K9
Body
Control
Module
X5 15
4672
BU/GY
X275 9
J235
H
J213
K
6817
YE
6816
WH
X256 42
35
45
X2 8
X1 4
13
3
A98
Front
Overhead
Console
Assembly
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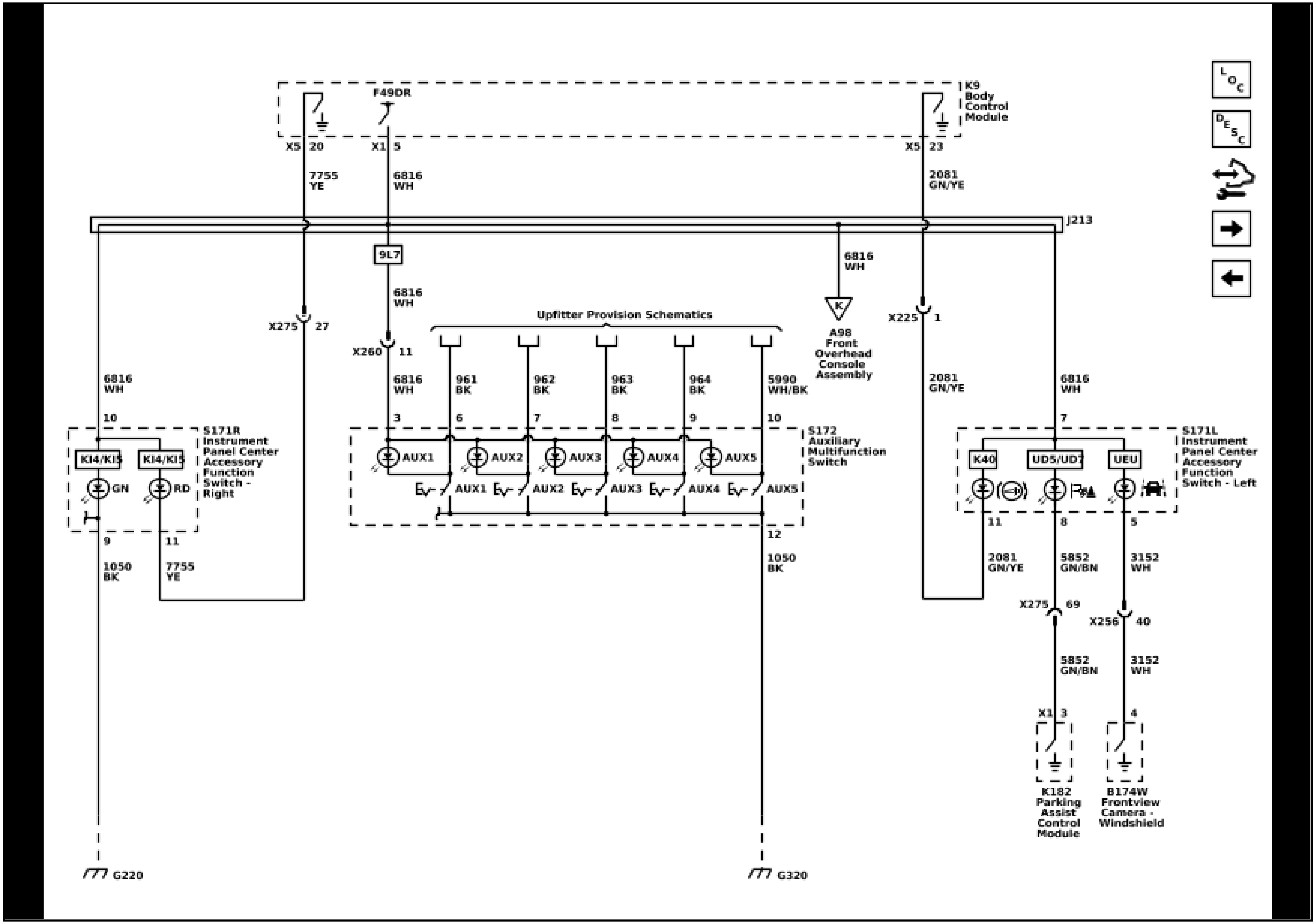
Logic
B+
OFF
X1 12
1851
BK/WH
G200

5995385

Interior Lights Dimming Schematics (Indicators)



K9
Body
Control
Module
F49DR
X5 20
X1 5
X5 23
7755
YE
6816
WH
2081
GN/YE
J213
9L7
6816
WH
A98
Front
Overhead
Console
Assembly
X275 27
X260 11
X225 1
Upfitter Provision Schematics
961
BK
962
BK
963
BK
964
BK
5990
WH/BK
3
6
7
8
9
10
S172
Auxiliary
Multifunction
Switch
AUX1
AUX2
AUX3
AUX4
AUX5
12
1050
BK
S171R
Instrument
Panel Center
Accessory
Function
Switch -
Right
KI4/KI5
GN
RD
9
11
1050
BK
7755
YE
S171L
Instrument
Panel Center
Accessory
Function
Switch - Left
K40
UD5/UD7
UEU
7
11
8
5
5852
GN/BN
3152
WH
X275 69
X256 40
X1 3
4
K182
Parking
Assist
Control
Module
B174W
Frontview
Camera -
Windshield
G220
G320

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Description and Operation

Exterior Lighting Systems Description and Operation

The exterior lighting system consist of the following lamps:

- Automatic high beam assist
- Backup lamps
- Daytime running lamps
- Front fog lamps
- Hazard warning lamps
- Headlamps
- Park, tail, license, and marker lamps
- Stop lamps
- Turn signal lamps
- Trailer lighting

Low Beam Headlamps

The headlamps may be turned ON in 3 different ways:

- When the headlamp switch is placed in the ON position, for normal operation
- When the headlamp switch is placed in the AUTO position, for automatic lamp control
- When the headlamp switch is placed in the AUTO position, with the windshield wipers ON in daylight conditions, after a 6 second delay

The BCM will also command the low beam headlamps ON during daylight conditions when the following conditions are met:

- Headlamp switch in the AUTO position
- Windshield wipers ON
- Vehicle in any gear but PARK

When the BCM commands the low beam headlamps ON, the vehicle operator will notice the interior backlighting for the instrument cluster and the various switches with backlighting control will dim to the level of brightness selected by the instrument panel dimmer switch.

The body control module (BCM) monitors three signal circuits from the headlamp switch. When the headlamp switch is in the AUTO position, all three signal circuits are open. When placed in the AUTO position, the BCM monitors inputs from the ambient light sensor to determine if headlamps are required or if daytime running lamps will be activated based on outside lighting conditions. When the headlamp switch is placed in the OFF position, the headlamp switch headlamps OFF signal circuit is grounded, indicating to the BCM that the exterior lamps should be turned OFF. With the headlamp switch in the PARK position, the headlamp switch park lamps ON signal circuit is grounded, indicating that the park lamps have been requested. When the headlamp switch is placed in the HEADLAMP position, both the headlamp switch park lamps ON signal circuit and the headlamp switch headlamps ON signal circuit are grounded. The BCM responds to the inputs by illuminating the park lamps and headlamps. When the low beam headlamps are requested, the BCM applies B+ to both low beam headlamp control circuits illuminating the low beam headlamps.

High Beam Headlamps

When the low beam headlamps are ON and the turn signal/multifunction switch is placed in the high beam position, ground is applied to the BCM through the high beam signal circuit. The BCM responds to the high beam request by applying ground to the high beam relay control circuit which energizes the high beam relay. With the high beam relay energized, the switch contacts close allowing battery voltage to flow through the high beam fuse to the high beam control circuits to there respective high beam solenoid actuators located within the headlamp assemblies. With the left and right high beam solenoid actuators active, the solenoid shutters open in each headlamp assembly exposing the remaining portion of the headlamp that was covered by the shutters illuminating the high beams at full intensity.

Automatic High Beam Assist (AHBA)

The automatic high beam assist (AHBA) system operates the high beam headlamps ON and OFF automatically when the system is activated and certain conditions are met. The AHBA system consists of a front camera module that detects light and is able to identify approaching vehicles on an even, straight road at a distance of greater than 0.4 km (0.25 mi). The front camera module analyzes light color, intensity, and movement. The AHBA system will turn OFF the high beam headlamps when approaching vehicle headlamps or preceding vehicle taillights are detected by the front camera module. AHBA can be deactivated when the headlamp dimmer switch is moved from the neutral position to the high beam or flash to pass positions. AHBA can be reactivated by operating the high beam select switch from the neutral position to the high beam position twice within 2 seconds.

AHBA System Activation

- Vehicle ON
- Headlamp switch placed in the AUTO position
- Headlamp dimmer switch must be in the neutral position
- Outside lighting conditions must be dark
- Vehicle speed greater than 25 mph (40 km/h)

AHBA System Operation

The following are conditions that the AHBA system will turn the high beam headlamps off during operation:

- The system detects approaching traffic headlamps
- The system detects preceding traffic tail lamps
- Ambient light level too high due to towns or twilight situations
- The vehicle’s speed drops below 13 mph (22 km/h)
- Delay

Note: AHBA may not operate properly if any of the following conditions exist:

- Approaching and preceding vehicles lamps are undetectable due to dirt, snow, road spray, smoke, fog, or any other airborne conditions.
- The front camera module is covered with ice, dirt, snow, haze, or is obstructed.
- The vehicle is being driven on winding or hilly road conditions which would make any on coming vehicle headlamps undetectable by the AHBA.

AHBA System Deactivation

- Manually operating the headlamp dimmer switch from neutral to high beam position
- AHBA is deactivated automatically when the front or rear fog lamps are turned ON

AHBA System Indicator

The status of the AHBA system is shown by a green indicator located on the instrument panel cluster. When AHBA is active, the indicator will be illuminated continuously. If the operator deactivates the AHBA system, the indicator will turn off.

Daytime Running Lamps

The daytime running lamps will illuminate continuously when the following conditions are met:

- The ignition is in the RUN or CRANK position
- The shift lever is out of the PARK position for vehicles equipped with automatic transmissions or the parking brake is released for vehicles with manual transmissions
- The low and high beam headlamps are OFF

The ambient light sensor is used to monitor outside lighting conditions. The ambient light sensor provides a voltage signal that will vary between 0.2 and 4.9 volts depending on outside lighting conditions. The body control module (BCM) provides a 5 V reference signal to the ambient light sensor and the HVAC control module provides a low reference ground. The BCM monitors the ambient light sensor signal circuit to determine if outside lighting conditions are correct for either daytime running lights or automatic lamp control when the headlamp switch is in the AUTO position. In daylight conditions the BCM applies B+ to both daytime running lamp control circuits to the left and right multifunction light emitting diode (LED) control modules located in each headlamp assembly. The multifunction LED control modules respond the to the B+ input from the BCM by illuminating the left and right daytime running lamp LED’s. Any function or condition that turns on the low beam headlamps will cancel daytime running lamps operation.

Flash to Pass

When the turn signal/multifunction switch is momentarily placed in the flash to pass position, ground is applied to the turn signal/multifunction switch. The turn signal/multifunction switch applies ground to the body control module (BCM) through the flash to pass switch signal circuit. The BCM responds to the flash to pass request by applying ground to the high beam relay control circuit. This energizes the high beam relay, closing the switch side contacts of the high beam relay, applying battery voltage to the 3 pin high beam fuse. Battery voltage is applied from the high beam fuse through the high beam control circuit to the high beam headlamp assemblies. This causes the high beam headlamps to illuminate at full brightness momentarily.

Front Fog Lamps

The front fog lamp relay is supplied with battery voltage at all times. The front fog lamp switch signal circuit is grounded momentarily by pressing the front fog lamp switch. The body control module (BCM) energizes the front fog lamp relay by applying ground to the front fog lamp relay control circuit. When the front fog lamp relay is energized, the relay switch contacts close and battery voltage is applied through the front fog lamp fuse to the front fog lamp supply voltage circuit which illuminates the front fog lamps.

Hazard Lamps

The hazard flashers may be activated in any power mode. The hazard switch signal circuit is momentarily grounded when the hazard switch is pressed. The body control module (BCM) responds to the hazard switch signal input by supplying battery voltage to all four turn signal lamps in an ON and OFF duty cycle. When the hazard switch is activated, the BCM sends a serial data message to the instrument panel cluster requesting both turn signal indicators to be cycled ON and OFF.

The instrument panel dimmer switch controls the brightness of the interior backlighting components. When the instrument panel dimmer switch is placed in a desired brightness position, the body control module (BCM) receives a signal from the instrument panel dimmer switch and responds by applying a pulse width modulated voltage to the hazard switch light emitting diode (LED) backlighting control circuit illuminating the LED to the desired level of brightness.

Park, Tail, and License Lamps

When the headlamp switch is placed in the HEAD or PARK position, ground is applied to the park lamp switch ON signal circuit to the body control module (BCM). The BCM responds by applying voltage to the park lamps, tail lamps, and license lamps control circuits illuminating the park, tail, and license lamps.

Stop Lamps

The brake pedal position sensor is used to sense the action of the driver application of the brake pedal. The brake pedal position sensor provides an analog voltage signal that will increase as the brake pedal is applied. The body control module (BCM) provides a low reference signal and a 5 V reference voltage to the brake pedal position sensor. When the variable signal reaches a voltage threshold indicating the brakes have been applied, the BCM will apply battery voltage to the left and right stop lamp control circuits as well as the center high mounted stop lamp control circuit illuminating the left and right stop lamps and the center high mounted stop lamp.

Turn Signal Lamps

Ground is applied at all times to the turn signal/multifunction switch. The turn signal lamps may only be activated with the ignition switch in the ON or START positions. When the turn signal/multifunction switch is placed in either the TURN RIGHT or TURN LEFT position, ground is applied to the body control module (BCM) through either the right turn or left turn signal switch signal circuit. The BCM responds to the turn signal switch input by applying a pulsating voltage to the front and rear turn signal lamps through there respective control circuits. When a turn signal request is received by the BCM, a serial data message is sent to the instrument cluster requesting the respective turn signal indicator be pulsed ON and OFF. Vehicles equipped with LED turn signals use an additional turn outage detection circuit for detecting when a LED turn signal goes out. This circuit is necessary due to the low current draw of LEDs. The turn outage detection circuit allows the module to alert the driver of the vehicle that a turn signal is out.

Backup Lamps

Automatic Transmission

With the engine ON and the transmission in the REVERSE position, the transmission control module (TCM) sends a serial data message to the body control module (BCM). The message indicates that the gear selector is in the REVERSE position. The BCM applies battery voltage to the backup lamps control circuit illuminating the backup lamps. Once the driver moves the gear selector out of the REVERSE position, a message is sent by the TCM via serial data requesting the BCM to remove battery voltage from the backup lamps control circuit. The engine must be ON for the backup lamps to operate.

Manual Transmission

The engine control module (ECM) provides a signal circuit to the backup lamp switch which is permanently grounded. With the engine running and the transmission in the reverse position, the backup lamp switch signal circuit is pulled low and the ECM responds by sending a serial data message to the body control module (BCM). The message indicates that the gear selector is in the reverse position. The BCM energizes the backup lamp relay by applying battery voltage to the backup lamp relay control circuit. When the backup lamp relay is energized, the relay switch contacts close and battery voltage is applied through the backup lamp fuses to the backup lamp control circuits which illuminates the backup lamps. Once the driver moves the gear selector out of the reverse position, a message is sent by the ECM via serial data requesting the BCM to remove battery voltage from the backup lamp relay control circuit. The engine must be running for the backup lamps to operate.

Exterior Courtesy Lighting

Cargo Lamps

The cargo lamps are controlled by a cargo lamp relay and a dedicated cargo lamp control circuit from the body control module (BCM). The cargo lamp relay is supplied with ground at all times. The cargo lamp switch signal circuit is grounded momentarily by pressing the cargo lamp switch located within the headlamp switch. The body control module (BCM) responds by energizing the cargo lamp relay by applying battery voltage to the cargo lamp relay control circuit as well as the dedicated cargo lamp control circuit. When the cargo lamp relay is energized, the relay switch contacts close and battery voltage is applied through the cargo lamp fuse to the cargo lamp supply voltage circuit which illuminates the cargo lamps. Cargo lamps are located in the center high mounted stop lamp assembly, truck bed, and tailgate handle when equipped.

Forward Flood Lamps

The flood lamp switch signal circuit is grounded momentarily by pressing the flood lamp switch located within the headlamp switch. The body control module (BCM) responds by applying battery voltage to the exterior flood lamp control circuits which illuminates the forward exterior flood lamps located within the exterior mirror assemblies. If the exterior flood lamps are left on with the vehicle off, the lights will shut off after approximately 10 minutes to prevent total battery discharge. The exterior flood lamps will immediately turn off if the vehicle leaves the parked position.

Lower Flood Lamps

The body control module (BCM) supplies battery voltage to the exterior LED lighting located under each outside rearview mirror for approach lighting. When the keyless entry transmitter is operated to either the lock or unlock functions the LED lighting located under each outside rearview mirror are commanded ON for approach lighting.

Trailer Lighting (With U1D)

The trailer lighting control module is supplied with battery voltage as well as ignition voltage and is permanently grounded. For lighting operation, the trailer lighting control module receives serial data messages from the body control module (BCM) indicating what lamps have been activated on the vehicle. The trailer lighting control module responds by applying voltage to the appropriate control circuits for the requested lamps illuminating the lamps on the attached trailer. The trailer lighting control module constantly monitors for trailer connection status, trailer lighting faults, and trailer theft deterrent purposes, this is accomplished through the lighting circuits of the trailer to determine if a trailer is connected. With the key OFF, the trailer lighting control module will periodically pulse the lighting circuits of the trailer to verify it is still connected. The lights on the trailer may flash at different intervals with the key OFF depending on which type of lights the trailer is built with. If a trailer is disconnected with the key ON, the vehicle will display a trailer disconnected message until a trailer is reconnected or the ignition is cycled.

Backup Lamps

With the engine running and the transmission in the reverse position, the transmission control module (TCM) sends a serial data message that indicates the gear selector is in the reverse position. The Trailer Lighting Control Module responds by applying voltage to the X88 Trailer Connector on the Trailer Backup Lamps control circuit when a trailer is connected. Once the driver moves the gear selector out of the reverse position, a message is sent by the TCM via serial data requesting the Trailer Lighting Control Module to remove battery voltage from the backup lamp control circuit.

Park Lamps

When the headlamp switch is placed in the HEAD or PARK position, ground is applied to the park lamp switch ON signal circuit to the body control module (BCM). The BCM responds by sending a serial data message to the Trailer Lighting Control Module. The Trailer Lighting Control Module responds by applying voltage to the X88 Trailer Connector on the Trailer Park Lamp control circuit when a trailer is connected.

Stop Lamps

The brake pedal position sensor is used to sense the action of the driver application of the brake pedal. The brake pedal position sensor provides an analog voltage signal that will increase as the brake pedal is applied. The body control module (BCM) provides a low reference signal and a 5 V reference voltage to the brake pedal position sensor. When the variable signal reaches a voltage threshold indicating the brakes have been applied, the BCM energizes the stop lamp relay circuit by applying voltage to the stop lamp relay control circuit. The Trailer Lighting Control Module senses the voltage on the stop lamp relay circuit and responds by applying voltage to the X88 Trailer Connector on the left and right Trailer Stop/Turn Signal Lamp control circuits when a trailer is connected.

Turn Signal Lamps

Ground is applied at all times to the turn signal/ multifunction switch. The turn signal lamps may only be activated with the ignition switch in the ON or START positions. When the turn signal/multifunction switch is placed in either the TURN RIGHT or TURN LEFT position, ground is applied to the body control module (BCM) through either the right turn or left turn signal switch signal circuit. The BCM responds by sending a serial data message to the Trailer Lighting Control Module. The Trailer Lighting Control Module responds by applying voltage to the X88 Trailer Connector on either the left or right Trailer Stop/Turn Signal Lamp control circuits when a trailer is connected.

Trailer Lighting (Without U1D)

Backup Lamps

For backup lamp operation, the backup lamp relay is supplied with battery voltage at all times. With the engine running and the transmission in the reverse position, the transmission control module (TCM) sends a serial data message to the body control module (BCM). The message indicates that the gear selector is in the reverse position. The BCM energizes the backup lamp relay by applying battery voltage to the backup lamp relay control circuit. When the backup lamp relay is energized, the relay switch contacts close and battery voltage is applied through the backup lamp fuses to the backup lamp control circuits which illuminates the backup lamps. Once the driver moves the gear selector out of the reverse position, a message is sent by the TCM via serial data requesting the BCM to remove battery voltage from the backup lamp relay control circuit.

Park Lamps

When the headlamp switch is placed in the HEAD or PARK position, ground is applied to the park lamp switch ON signal circuit to the body control module (BCM). The BCM responds by applying voltage to the park lamps, tail lamps, license lamps, and trailer park lamps control circuits illuminating the park, tail, license, and trailer park lamps.

Stop Lamps

For stop lamp operation, the left and right trailer stop/ turn signal lamp relay’s are supplied with battery voltage at all times. The brake pedal position sensor is used to sense the action of the driver application of the brake pedal. The brake pedal position sensor provides an analog voltage signal that will increase as the brake pedal is applied. The body control module (BCM) provides a low reference signal and a 5 V reference voltage to the brake pedal position sensor. When the variable signal reaches a voltage threshold indicating the brakes have been applied, the BCM energizes the left and right trailer stop/turn signal lamp relay’s by applying voltage to the left and right stop lamp relay control circuits. With the left and right trailer stop/turn signal lamp relay’s energized, the relay switch contacts close and battery voltage is applied through the left and right trailer stop/turn signal fuse’s to the trailer stop lamp control circuits which illuminates the trailer stop lamps.

Turn Signal Lamps

For turn signal lamp operation, the left and right trailer stop/turn signal lamp relay’s are supplied with battery voltage at all times. Ground is applied at all times to the turn signal/multifunction switch. The turn signal lamps may only be activated with the ignition switch in the ON or START positions. When the turn signal/multifunction switch is placed in either the TURN RIGHT or TURN LEFT position, ground is applied to the body control module (BCM) through either the right turn or left turn signal switch signal circuit. The BCM responds to the turn signal switch input by applying a pulsating voltage to the left and right trailer stop/turn signal lamp relay control circuits energizing the relay’s in an ON and OFF cycle. With the left and right trailer stop/turn signal lamp relay’s energized, the relay switch contacts cycle ON and OFF applying battery voltage through the left and right trailer stop/turn signal fuse’s to the trailer turn signal lamp control circuits which illuminates the trailer turn signal lamps in an ON and OFF cycle.

Battery Run Down Protection/ Inadvertent Power

To provide battery run down protection, the exterior lamps will be deactivated automatically under certain conditions. The BCM monitors the state of the headlamp switch. If the park or headlamp switch is ON when the ignition switch is placed in either the CRANK or RUN position and then placed in the OFF position, the BCM initiates a 10 minute timer. At the end of the 10 minutes, the BCM will turn off the control power output to the park lamp controls as well as the headlamp relay coils, deactivating the exterior lamps. This feature will be cancelled if any power mode other than OFF becomes active. The BCM will disable battery run down protection if any of the following conditions exist. The park or headlamp switch is placed in the ON to OFF position, and back to the ON position during battery run down protection. The BCM determined that the park or headlamp switch was not active when the ignition was turned OFF.

Interior Lighting Systems Description and Operation

Interior Lamps

The interior lighting system consist of two groups. This first group includes lamps that may not be dimmed.

- Dome lamps
- Center console compartment lamps
- Reading lamps
- Sunshade mirror lamps

Dome Lamps

The dome lamp switch has 3 positions: DOOR, OFF, and ON. The ON position provides a ground for continuous operation and the dome lamp will remain illuminated until the switch is placed in either the DOOR or OFF position. When in the DOOR position, the dome lamp operation is controlled by the body control module (BCM). When any door is opened, the door ajar switch contacts close and the BCM receives a door-open input. The BCM illuminates the dome lamp when any door is opened or a door lock/unlock request is activated with the key fob. After all doors have been closed, the dome lamp will remain illuminated approximately 3 seconds after the last door closes. When the driver places the dome lamp switch in the OFF position, the dome lamp will be disabled. In the event that the dome lamp were to remain illuminated for more than 10 minutes with the ignition switch in the OFF position and no doors opened, the BCM will deactivate the dome lamp control circuit to prevent total battery discharge. The dome lamps will turn OFF using the theater dimming feature when controlled by the BCM.

Center Console Compartment Lamp

The inadvertent power supply voltage circuit from the BCM provides battery voltage to the center console compartment lamp. When the center console is opened, the center console compartment lamp switch contacts close providing a path to ground and the center console compartment lamp illuminates. If the operator inadvertently leaves the center console compartment door open with the center console compartment lamp ON, the BCM will turn all interior lamps OFF after 10 minutes has passed since any switch activation has been detected by the BCM.

Reading Lamps

The inadvertent power supply voltage circuit from the BCM provides battery positive voltage to each reading lamp. When a reading lamp switch is activated, the switch contacts close providing a path to ground and the reading lamp illuminates. If the operator inadvertently leaves a reading lamp ON, the BCM will turn all interior lamps OFF after 10 minutes has passed since any switch activation has been detected by the BCM.

Sunshade Mirror Lamps

The inadvertent power supply voltage circuit from the BCM provides battery voltage to each set of sunshade mirror lamps. When the sunshade mirror cover is opened, a switch closes providing ground and the sunshade lamps illuminate. If the operator inadvertently leaves a sunshade mirror cover open with the lamps ON, the BCM will turn all interior lamps OFF after 10 minutes has passed since any switch activation has been detected by the BCM.

Keyless Entry Interior Illumination

When the operator uses the keyless entry transmitter in order to unlock the doors, the BCM receives a door-unlock signal. The BCM must receive inputs from various systems that indicate that the ignition switch is OFF, the courtesy lamp switch is OFF, and all doors are closed before the BCM will activate the interior lamps. After all doors have been closed, the courtesy lamps will turn OFF immediately if the ignition switch is turned to the ON position, the door locks are LOCKED, or approximately 20 seconds after the last door closes. The BCM will turn off the courtesy lamps through the theater dimming feature. The BCM keeps the courtesy lamps on for 40 seconds after an alarm event is completed.

Interior Lamps Dimming

The second group includes lamps which may be dimmed. This group may use a combination of light emitting diodes (LED), incandescent lamps, and pulse width modulation (PWM) illumination.

- Dome/reading lamps – front
- Dome/reading lamps – rear
- Door lock switch – driver
- Door lock switch – passenger
- Garage door opener switch
- Headlamp switch
- HVAC control head assembly
- Multifunction switch – instrument panel
- Outside rearview mirror switch
- Park brake switch
- Radio
- Roof beacon switch
- Seat memory switch – driver
- Sliding rear window switch
- Steering wheel control switch – left
- Steering wheel control switch – right
- Sun roof switch
- Sun roof tilt switch
- Transfer case shift control switch
- Trailer brake control switch
- Window switch – driver
- Window switch – passenger

With the headlamp switch in the PARK or HEAD position, the park lamp switch signal circuit provides an input to the body control module (BCM). The BCM responds by applying voltage to the park lamps as well as the backlight dimming control circuits illuminating all components with interior backlighting. All interior backlighting turns ON at the dimming level indicated by the instrument panel dimmer switch. The instrument panel dimmer switch is a momentary type switch and utilizes a resistor ladder to increase and decrease the brightness of the interior backlighting components. The instrument panel dimmer switch provides a voltage signal to the BCM that will increase as the brightness of the lights are increased and decrease as the brightness of the lights are decreased. The BCM provides a low reference signal and a B+ circuit to the instrument panel dimmer switch. When the instrument panel dimmer switch is held in the desired position, the dimmed voltage setting is applied from the instrument panel dimmer switch through the instrument panel dimmer switch signal circuit to the BCM. The BCM interprets the signal and applies a pulse width modulated voltage through the backlighting control circuits illuminating the interior backlighting to the requested level of brightness.

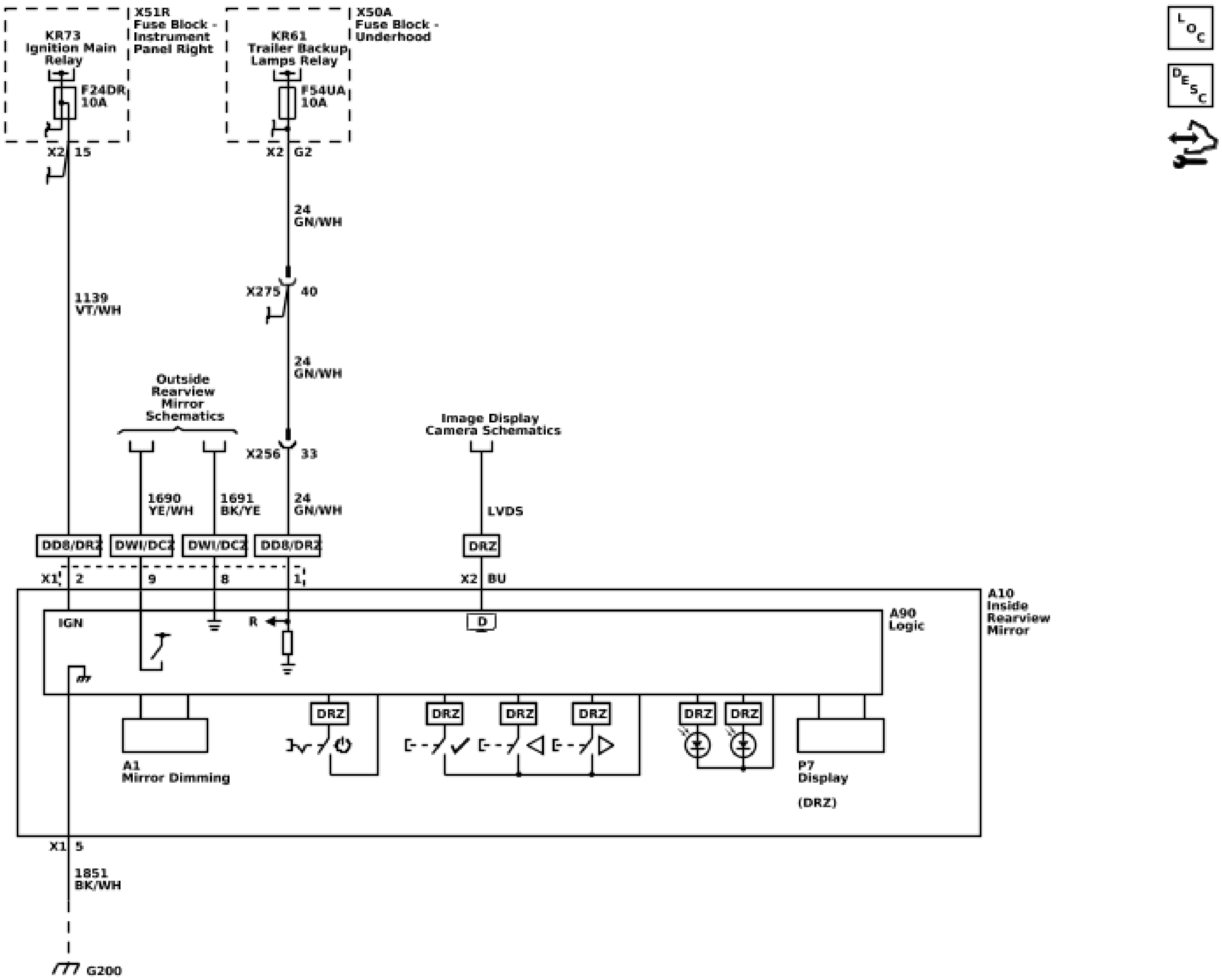
Battery Rundown Protection/ Inadvertent Power

The BCM inadvertent power supply voltage circuit provides battery voltage to all of the interior courtesy lamps. In the event that any of these lamps were to remain illuminated for a period of more than 10 minutes with the ignition switch in the OFF position, the BCM will deactivate the inadvertent power supply voltage circuit to prevent total battery discharge. If the ignition switch is turned to any position other than OFF, or if a lamp switch is activated during this 10 minute period, the timer resets for another 10 minutes.

Mirrors

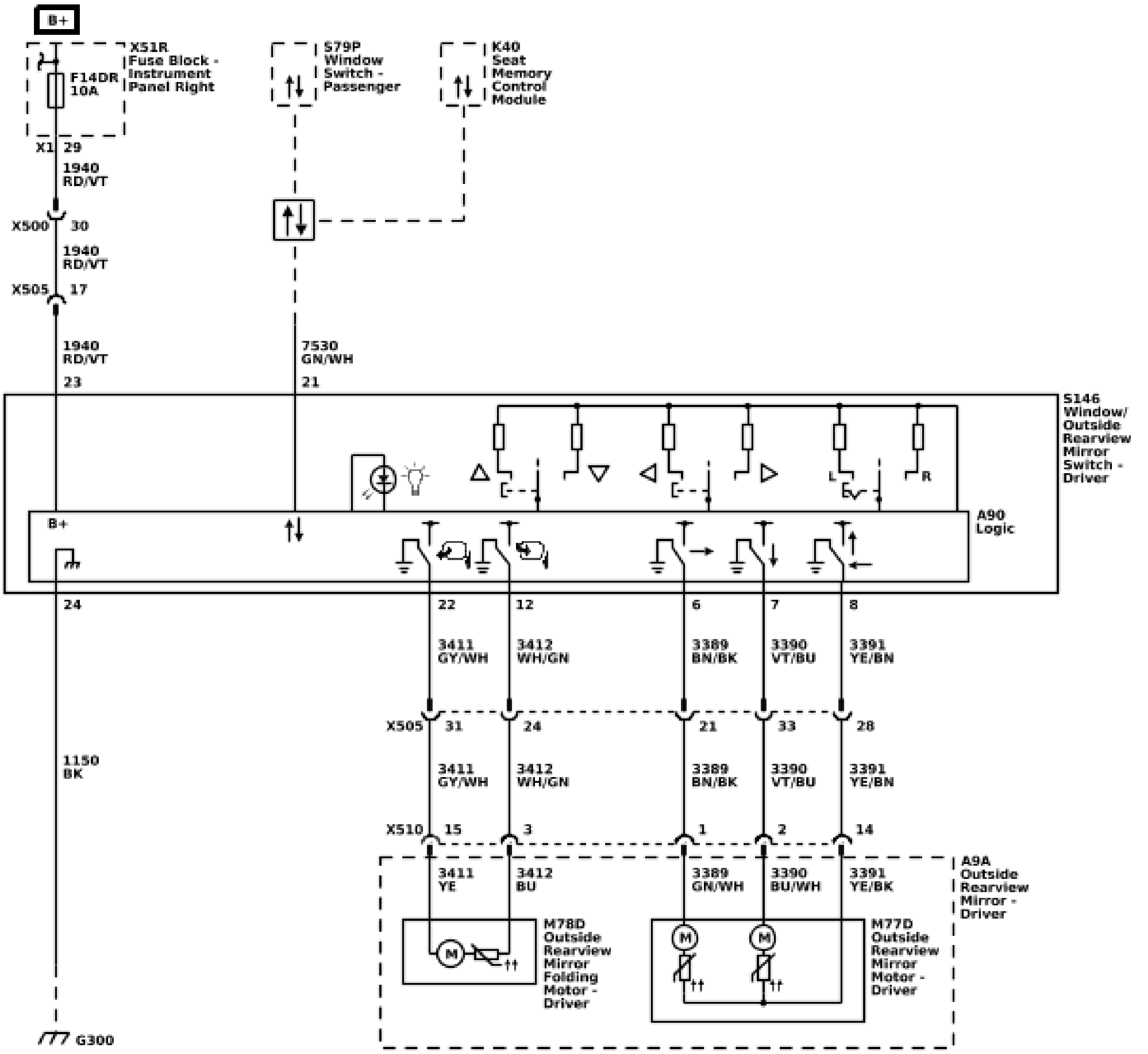
Schematic and Routing Diagrams

Inside Rearview Mirror Schematics (Inside Rearview Mirror (DD8/DRZ))


X51R
Fuse Block - Instrument Panel Right
KR73
Ignition Main Relay
F24DR
10A
X2 15
1139
VT/WH
X50A
Fuse Block - Underhood
KR61
Trailer Backup Lamps Relay
F54UA
10A
X2 G2
24
GN/WH
X275 40
24
GN/WH
X256 33
24
GN/WH
Outside Rearview Mirror Schematics
1690
YE/WH
1691
BK/YE
Image Display Camera Schematics
LVDS
DD8/DRZ
DWI/DCZ
DWI/DCZ
DD8/DRZ
DRZ
X1 2
9
8
1
X2 BU
A10
Inside Rearview Mirror
A90
Logic
IGN
R
D
DRZ
DRZ
DRZ
DRZ
DRZ
DRZ
A1
Mirror Dimming
P7
Display
(DRZ)
X1 5
1851
BK/WH
G200

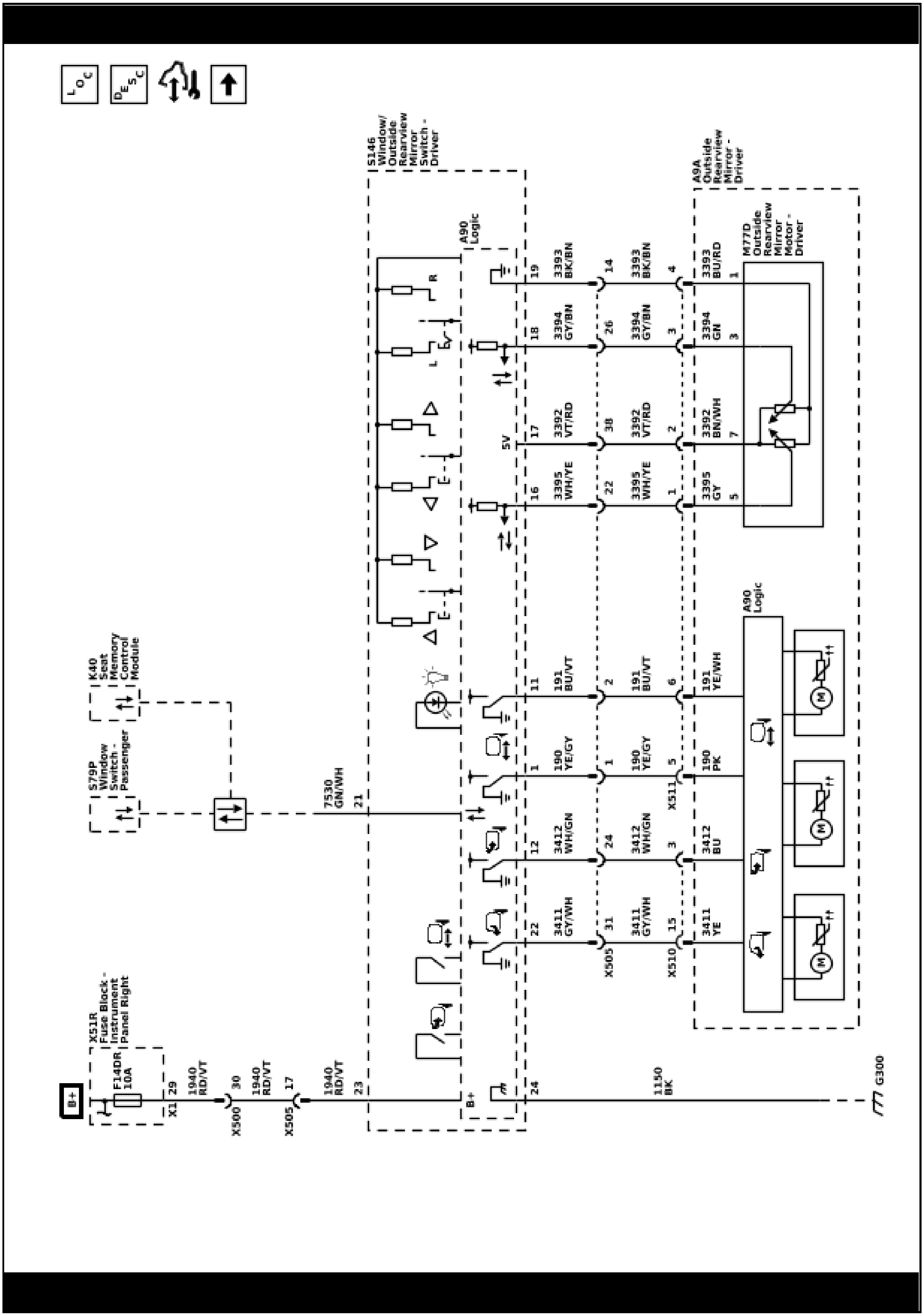
5995387

Outside Rearview Mirror Schematics (Controls and Driver (A45))


B+
X51R
Fuse Block -
Instrument
Panel Right
F14DR
10A
X1 29
1940
RD/VT
X500 30
1940
RD/VT
X505 17
1940
RD/VT
23
S79P
Window
Switch -
Passenger
K40
Seat
Memory
Control
Module
7530
GN/WH
21
S146
Window/
Outside
Rearview
Mirror
Switch -
Driver
A90
Logic
B+
L
R
24
1150
BK
G300
22
12
6
7
8
3411
GY/WH
3412
WH/GN
3389
BN/BK
3390
VT/BU
3391
YE/BN
X505 31
24
21
33
28
3411
GY/WH
3412
WH/GN
3389
BN/BK
3390
VT/BU
3391
YE/BN
X510 15
3
1
2
14
A9A
Outside
Rearview
Mirror -
Driver
3411
YE
3412
BU
3389
GN/WH
3390
BU/WH
3391
YE/BK
M78D
Outside
Rearview
Mirror
Folding
Motor -
Driver
M77D
Outside
Rearview
Mirror
Motor -
Driver
M
M
M

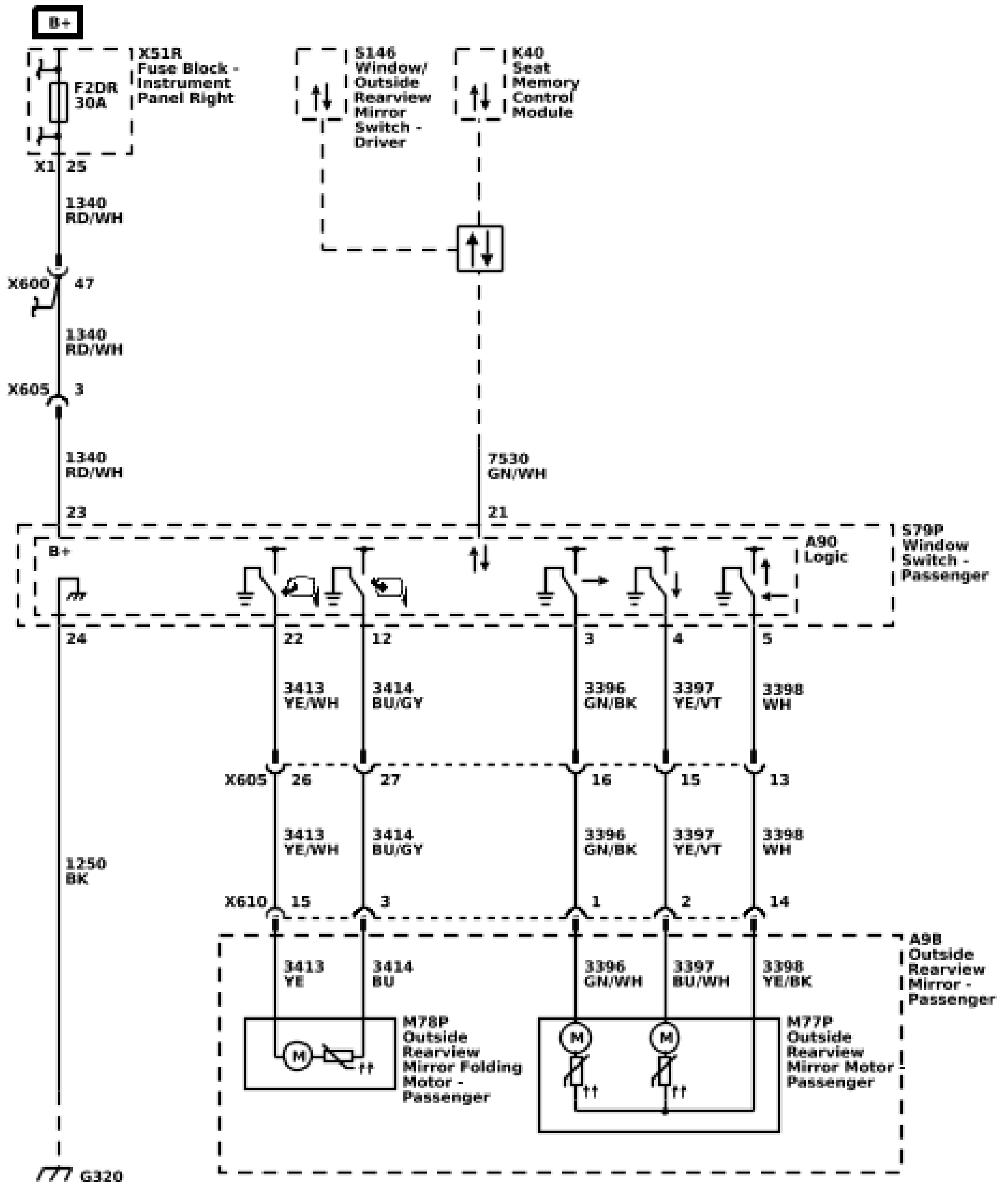
5995388

Outside Rearview Mirror Schematics (Controls and Driver (DZC))


B+
X51R Fuse Block - Instrument Panel Right
F14DR 10A
X1 29
1940 RD/VT
X500 30
1940 RD/VT
X505 17
1940 RD/VT
23
S79P Window Switch - Passenger
K40 Seat Memory Control Module
7530 GN/WH
21
S146 Window/ Outside Rearview Mirror Switch - Driver
A90 Logic
B+
24
1150 BK
G300
22
3411 GY/WH
31
3411 GY/WH
15
3411 YE
12
3412 WH/GN
24
3412 WH/GN
3
3412 BU
1
190 YE/GY
1
190 YE/GY
5
190 PK
11
191 BU/VT
2
191 BU/VT
6
191 YE/WH
X505
X510
X511
16
3395 WH/YE
22
3395 WH/YE
1
3395 GY
5
5V
17
3392 VT/RD
38
3392 VT/RD
2
3392 BN/WH
7
18
3394 GY/BN
26
3394 GY/BN
3
3394 GN
3
19
3393 BK/BN
14
3393 BK/BN
4
3393 BU/RD
1
L
R
A9A Outside Rearview Mirror - Driver
M77D Outside Rearview Mirror Motor - Driver
A90 Logic
M
M
M

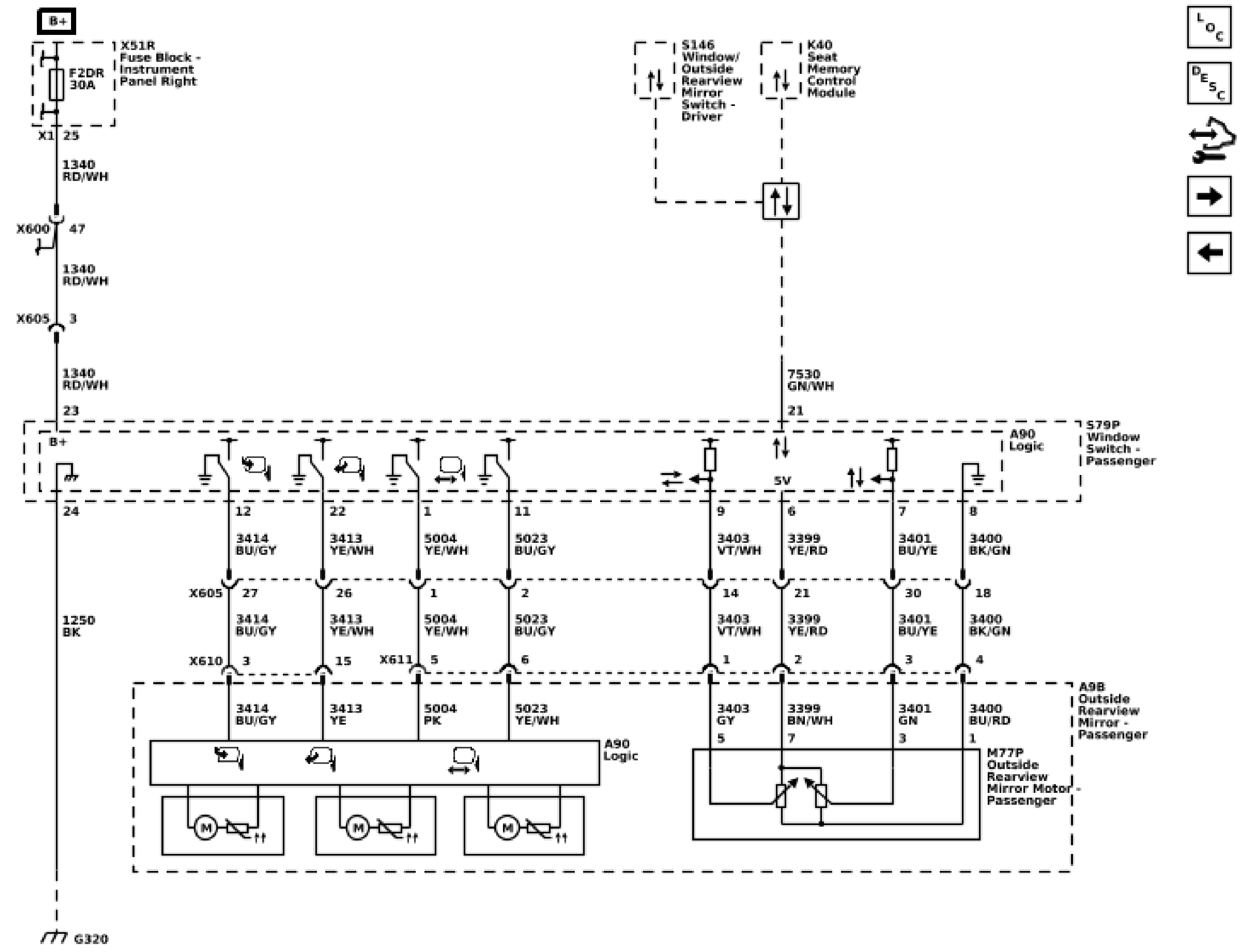
5995389

Outside Rearview Mirror Schematics (Passenger (A45))

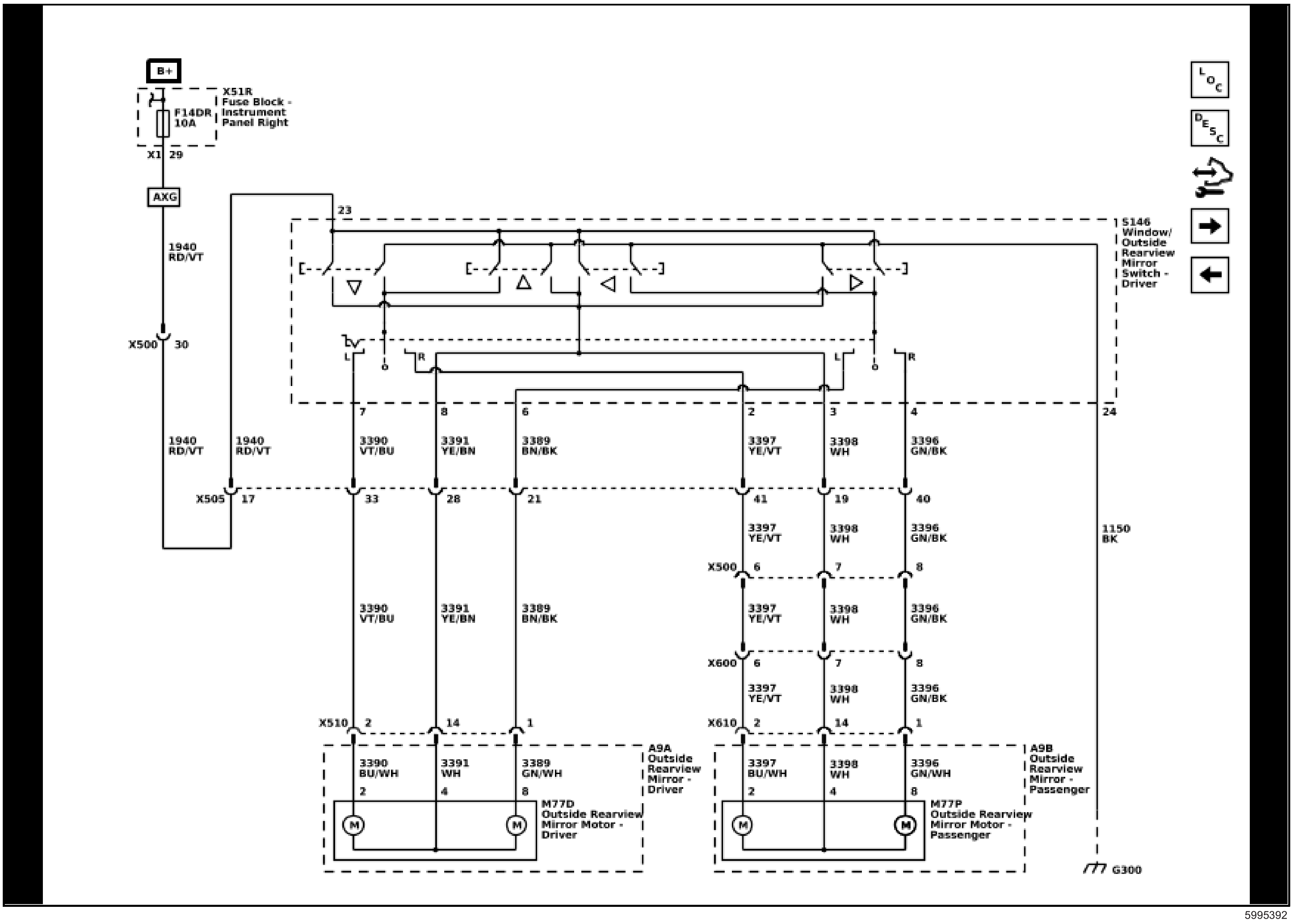

B+
X51R Fuse Block - Instrument Panel Right
F2DR 30A
X1 25
1340 RD/WH
X600 47
1340 RD/WH
X605 3
1340 RD/WH
23
S146 Window/ Outside Rearview Mirror Switch - Driver
K40 Seat Memory Control Module
7530 GN/WH
21
S79P Window Switch - Passenger
A90 Logic
B+
24
22
12
3
4
5
3413 YE/WH
3414 BU/GY
3396 GN/BK
3397 YE/VT
3398 WH
X605 26
27
16
15
13
3413 YE/WH
3414 BU/GY
3396 GN/BK
3397 YE/VT
3398 WH
1250 BK
X610 15
3
1
2
14
A98 Outside Rearview Mirror - Passenger
3413 YE
3414 BU
3396 GN/WH
3397 BU/WH
3398 YE/BK
M78P Outside Rearview Mirror Folding Motor - Passenger
M77P Outside Rearview Mirror Motor Passenger
M
G320

5995390

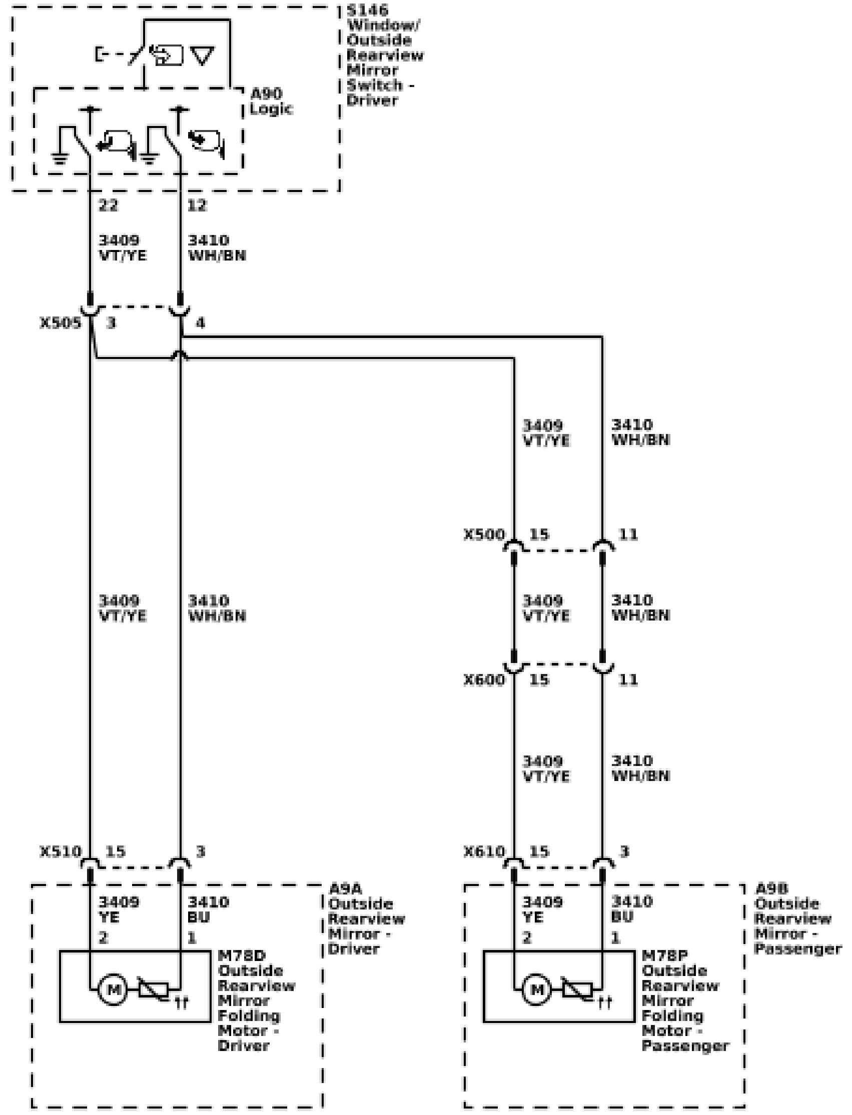
Outside Rearview Mirror Schematics (Passenger (DZC))


B+
X51R
Fuse Block -
Instrument
Panel Right
F2DR
30A
X1 25
1340
RD/WH
X600 47
1340
RD/WH
X605 3
1340
RD/WH
23
S146
Window/
Outside
Rearview
Mirror
Switch -
Driver
K40
Seat
Memory
Control
Module
7530
GN/WH
21
B+
5V
A90
Logic
S79P
Window
Switch -
Passenger
24
12
22
1
11
9
6
7
8
3414
BU/GY
3413
YE/WH
5004
YE/WH
5023
BU/GY
3403
VT/WH
3399
YE/RD
3401
BU/YE
3400
BK/GN
X605 27
26
1
2
14
21
30
18
1250
BK
X610 3
15
X611 5
6
1
2
3
4
3414
BU/GY
3413
YE
5004
PK
5023
YE/WH
3403
GY
3399
BN/WH
3401
GN
3400
BU/RD
5
7
3
1
A90
Logic
M77P
Outside
Rearview
Mirror Motor -
Passenger
A9B
Outside
Rearview
Mirror -
Passenger
M
M
M
G320
LOC
DESC
5995391

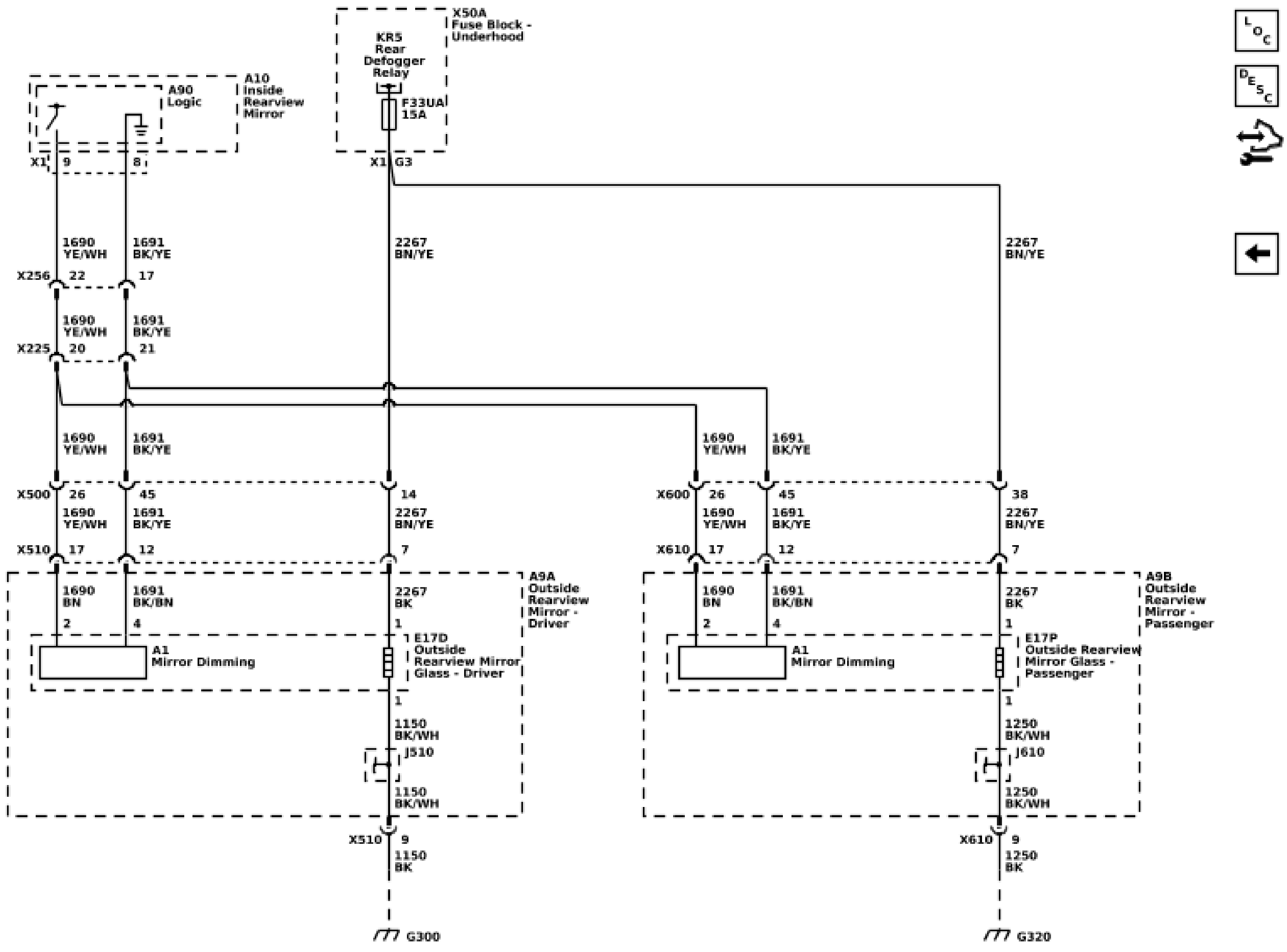
Outside Rearview Mirror Schematics (Position (AXG-A45))


B+
X51R
Fuse Block - Instrument Panel Right
F14DR
10A
X1 29
AXG
1940
RD/VT
X500 30
1940
RD/VT
1940
RD/VT
X505 17
23
S146
Window/ Outside Rearview Mirror Switch - Driver
L
R
L
R
7
8
6
2
3
4
24
3390
VT/BU
3391
YE/BN
3389
BN/BK
3397
YE/VT
3398
WH
3396
GN/BK
33
28
21
41
19
40
1150
BK
X500 6
7
8
X600 6
7
8
X510 2
14
1
X610 2
14
1
3390
BU/WH
3391
WH
3389
GN/WH
3397
BU/WH
3398
WH
3396
GN/WH
2
4
8
M77D
Outside Rearview Mirror Motor - Driver
A9A
Outside Rearview Mirror - Driver
M77P
Outside Rearview Mirror Motor - Passenger
A9B
Outside Rearview Mirror - Passenger
M
G300
5995392

Outside Rearview Mirror Schematics (Folding (DWI without A45))


S146 Window/ Outside Rearview Mirror Switch - Driver
A90 Logic
22
12
3409 VT/YE
3410 WH/BN
X505
3
4
3409 VT/YE
3410 WH/BN
X500
15
11
3409 VT/YE
3410 WH/BN
X600
15
11
3409 VT/YE
3410 WH/BN
3409 VT/YE
3410 WH/BN
X510
15
3
X610
15
3
A9A Outside Rearview Mirror - Driver
3409 YE
3410 BU
2
1
M78D Outside Rearview Mirror Folding Motor - Driver
M
A9B Outside Rearview Mirror - Passenger
3409 YE
3410 BU
2
1
M78P Outside Rearview Mirror Folding Motor - Passenger
M
5995393

Outside Rearview Mirror Schematics (Dimming and Heating (DWI/DCZ))


X50A
Fuse Block - Underhood
KR5
Rear
Defogger
Relay
F33UA
15A
X1 G3
A10
Inside
Rearview
Mirror
A90
Logic
X1 9
8
1690
YE/WH
1691
BK/YE
2267
BN/YE
X256 22
17
X225 20
21
X500 26
45
14
X510 17
12
7
X600 26
45
38
X610 17
12
7
1690
BN
1691
BK/BN
2267
BK
2
4
1
A9A
Outside
Rearview
Mirror -
Driver
A1
Mirror Dimming
E17D
Outside
Rearview Mirror
Glass - Driver
1150
BK/WH
J510
X510 9
1150
BK
G300
A9B
Outside
Rearview
Mirror -
Passenger
E17P
Outside Rearview
Mirror Glass -
Passenger
1250
BK/WH
J610
X610 9
1250
BK
G320
LOC
DESC

5995394

Description and Operation

Automatic Day-Night Mirror Description and Operation

Inside Rearview Mirror with the Automatic Day-Night Feature System Operation

The inside rearview mirror uses 2 photocell sensors. One sensor is the headlight sensor, located on the face side of the mirror. The headlight sensor is used to determine light conditions present at the mirror face. The other sensor is the ambient light sensor, located on the rear of the mirror or windshield side. The ambient light sensor is used to determine the exterior light conditions. With a low exterior light condition detected, and a high light condition from behind the car, at the headlight sensor, the inside rearview mirror will automatically darken the face of the mirror.

In the daytime, the mirror is in a normal state because of the high exterior light condition that is indicated by the ambient light sensor. With the gear selector lever in the REVERSE position and the engine running, backup lamp supply voltage is supplied as an input to the inside rearview mirror. The mirror monitors this input to disable the automatic day-night feature. This allows the driver to see objects in the mirror clearly when backing up, even during the night.

Driver Outside Rearview Mirror with Automatic Day-Night System Operation (If Equipped)

The automatic day-night feature of the driver outside rearview mirror is controlled by the inside rearview mirror. The inside rearview mirror supplies control and low reference to the driver outside rearview mirror. At night, with the automatic day-night feature enabled, the driver outside rearview mirror will automatically darken with the inside rearview mirror to reduce glare from headlamps behind the vehicle.

Outside Mirror Description and Operation (Without A45)

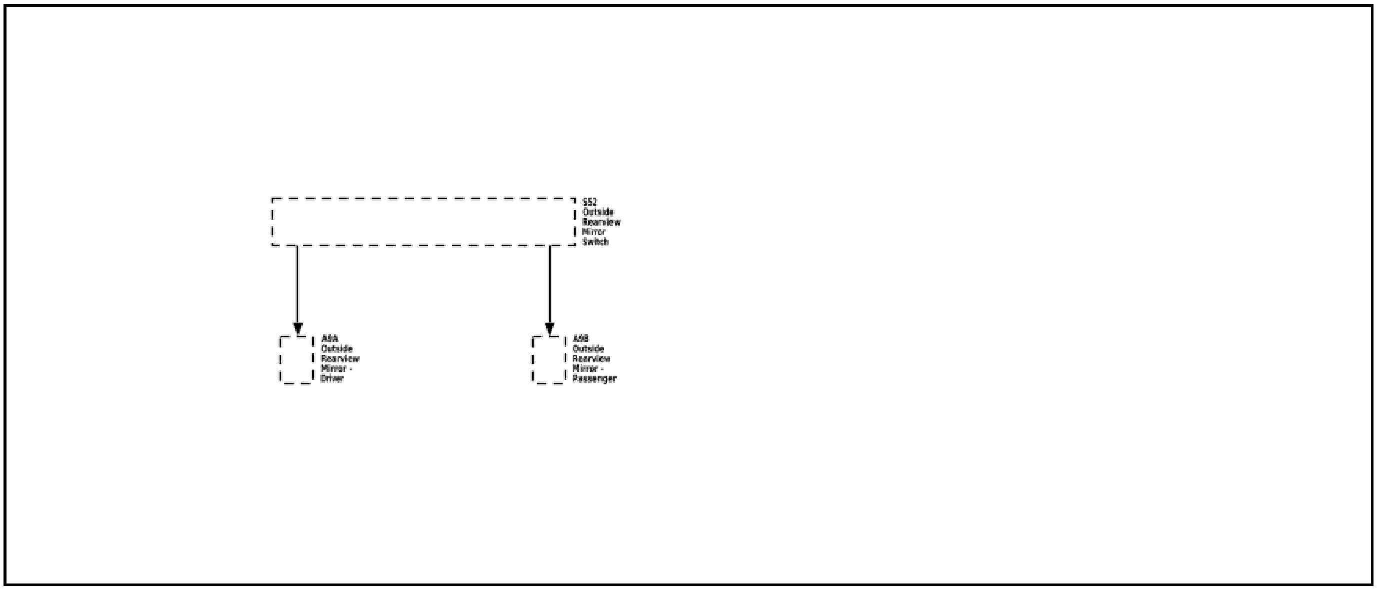
Power Mirror System Components

The power mirror system consists of the following components:

- Mirror direction switch — Controls the left, right, up and down movements of the mirrors
- Mirror select switch — Allows the operator to select the mirror to be moved
- Left outside mirror — Contains both the horizontal and vertical mirror motors
- Right outside mirror — Contains both the horizontal and vertical mirror motors

Each of the outside power mirrors contains 2 motors. The up-down motor operates the vertical directions and the left-right motor operates the horizontal directions. Each of the power mirror motors are internally circuit breaker protected.

Power Mirrors Without A45 Block Diagram



3270441

Power Mirror System Controls

The outside mirror switch incorporates a mirror select switch and a 4 position mirror direction switch.

The mirror select switch allows the driver to select the mirror to be moved by turning the switch to L position enabling the left outside mirror or turning the switch to R position enabling the right outside mirror.

The mirror direction switch is a 4 position switch that allows the operator to move the selected mirror up, down, left or right.

Power Mirror System Operation

The outside mirror switch receives power through the battery positive voltage circuit from the underhood fuse block. The outside mirror switch also receives a constant ground.

The 4 positions of the direction switch have multiple switch contacts. When not in use, the directional contacts are isolated from any circuit. Each of the contacts are connected to opposing sides of the appropriate mirror motors through the selector switch. The selector switch interrupts or completes these circuits depending on the position of the selector switch, L or R.

If the mirror select switch is placed in the L position and the up switch is pressed, battery voltage will be supplied to the driver outside mirror vertical motor through the driver mirror motor up control circuit and return to the mirror switch through the driver mirror motor left/down control circuit, then to ground and the mirror will move up. If the down switch is pressed, the driver mirror motor left/down control circuit supplies battery voltage and the driver mirror motor up control circuit completes the path to the mirror switch, then to ground and the mirror will move down.

The remainder of the mirror functions operate in the same manner as described above. Placing the mirror control switch in opposing positions, left/right or up/down, will reverse the voltage polarity to the mirror motor, utilizing the same circuits and the mirror will move accordingly.

Heated Mirrors

The heated mirrors are controlled through the rear defog relay. Whenever the rear window defogger is turned ON, battery voltage is supplied to the mirror heater elements through the left and right mirror heater element control circuits.

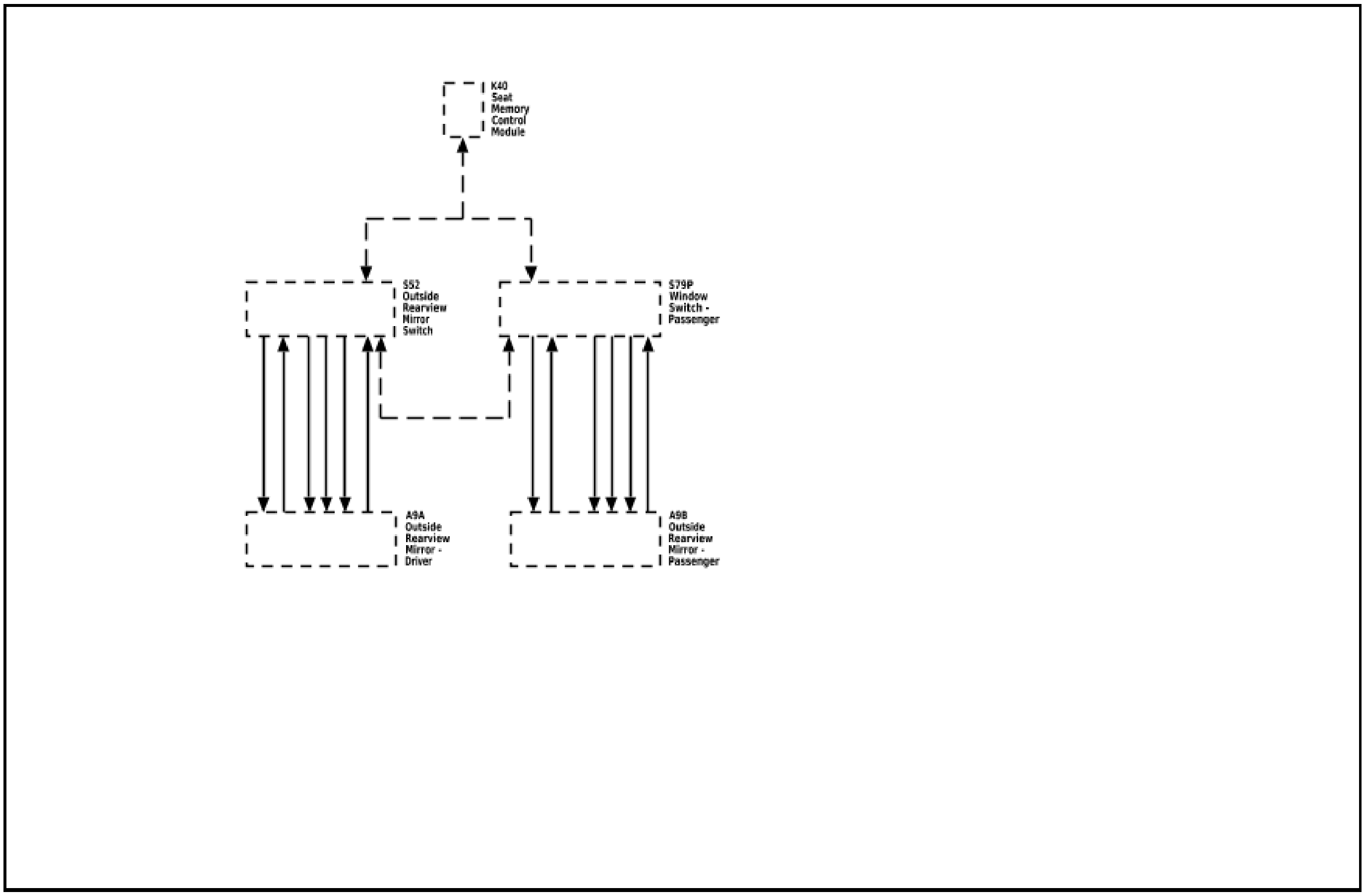
Outside Mirror Description and Operation (With A45)

Power Mirror System Components

The power mirror system consists of the following components:

- Memory Seat Control Module
- Outside Rearview Mirror Switch
- Passenger Window Switch
- Driver Outside Rearview Mirror
- Passenger Outside Rearview Mirror

Power Mirrors with A45 Block Diagram



3520568

Power Mirror System Controls

The outside mirror switch and passenger window switch are on a serial data circuit with the memory seat control module as the master. The mirror select and directional control switches are inputs to the memory seat module through the serial data circuit. When the memory seat module receives switch inputs from the outside mirror switch, mirror output commands are sent to the appropriate switch through the serial data circuit. The outside mirror switch and passenger window switch control the left and right outside rear view mirrors through bi-directional motor control circuits. The motor control circuits are floating while in an inactive state and the switches will apply power and ground to the control circuits as necessary to move the mirror in the commanded direction.

Mirror position is determined by both horizontal and vertical position sensors in each of the power mirrors. The outside mirror switch and passenger window switch supply a 5 V reference, low reference, and horizontal and vertical position signal circuits to these sensors. The signal circuits are referenced from 5 V by the switches and the signal circuit voltage levels represent the mirror positions. The mirror positions are sent to the memory seat module through the serial data circuit where they are stored for memory mirror operation. When the memory seat module receives a memory recall command, the memory seat module will send the go to position commands to the outside mirror switch and passenger window switch. The switches will then drive the appropriate mirror motors to the commanded position sensor settings.

Mirror Folding

RPO: DWI or DZC

The outside rearview mirror switch sends the mirror select and mirror fold/unfold inputs to the memory seat control module through LIN data. When the memory seat control module receives a fold/unfold signal it will send a fold/unfold command to the outside rearview mirror switch and the passenger window switch. The outside mirrors will fold or unfold depending on their current state. The outside rearview mirror switch and the passenger window switch control the fold/unfold motors through bi-directional control circuits.
If equipped with auto folding mirrors, the BCM receives the input of the lock/unlock button being held on the transmitter and sends the signal to the memory seat module through serial data to command the mirrors to fold/unfold.

Mirror Extending

RPO: DZC

The outside rearview mirror switch sends the mirror select and mirror extend/retract inputs to the memory seat control module through LIN data. When the memory seat control module receives an extend/retract signal it will send a extend/retract command to the outside rearview mirror switch and the passenger window switch. The outside mirrors will fold or unfold depending on their current state. The outside rearview mirror switch and the passenger window switch control the extend/retract motors through bi-directional control circuits.

Heated Mirrors

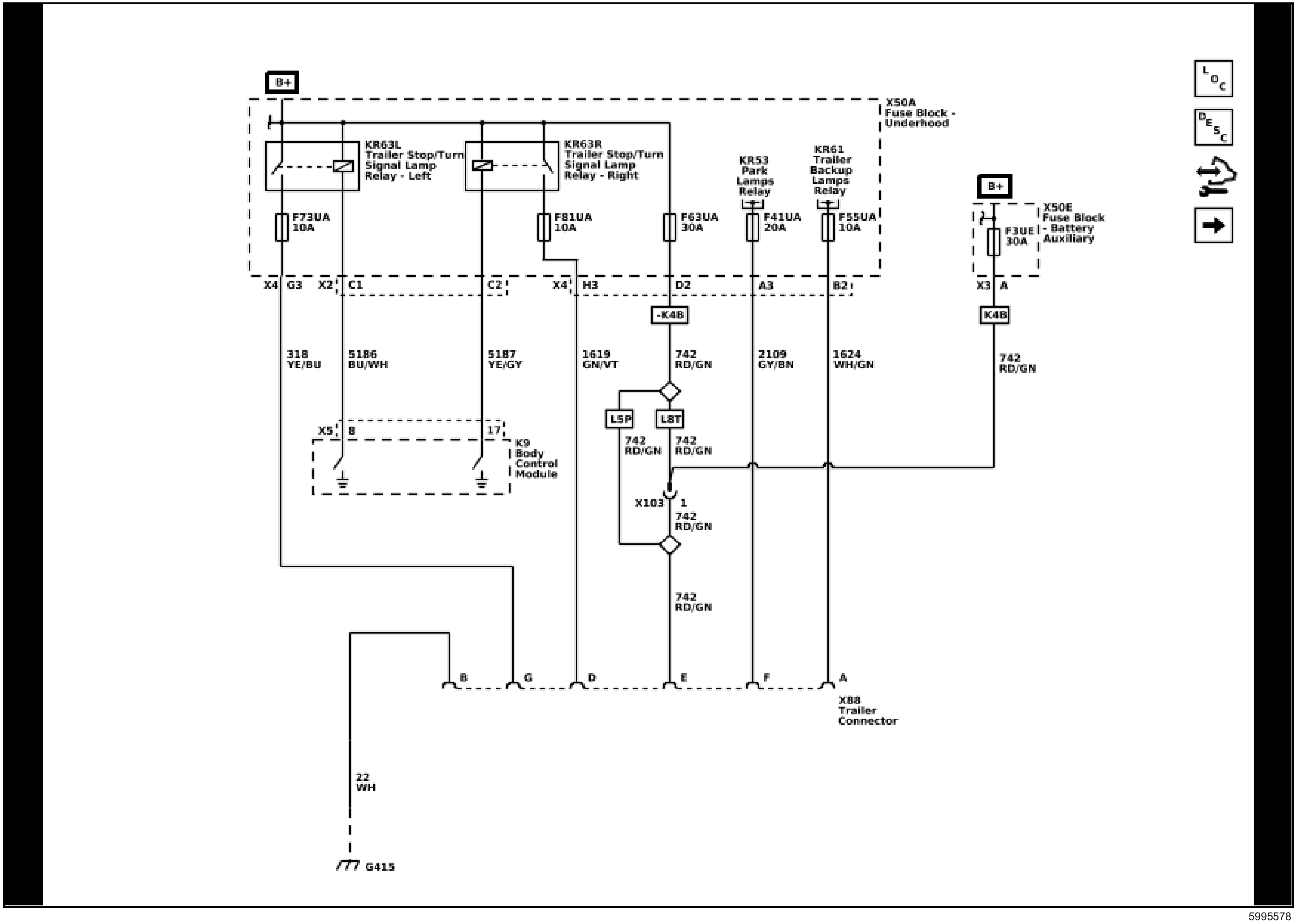
RPO: DBG, DWI, or DZC

The heated mirrors are controlled through the rear defog relay. Whenever the rear window defogger is turned on battery voltage is supplied to the mirror heater elements through the left and right mirror heater element control circuits.

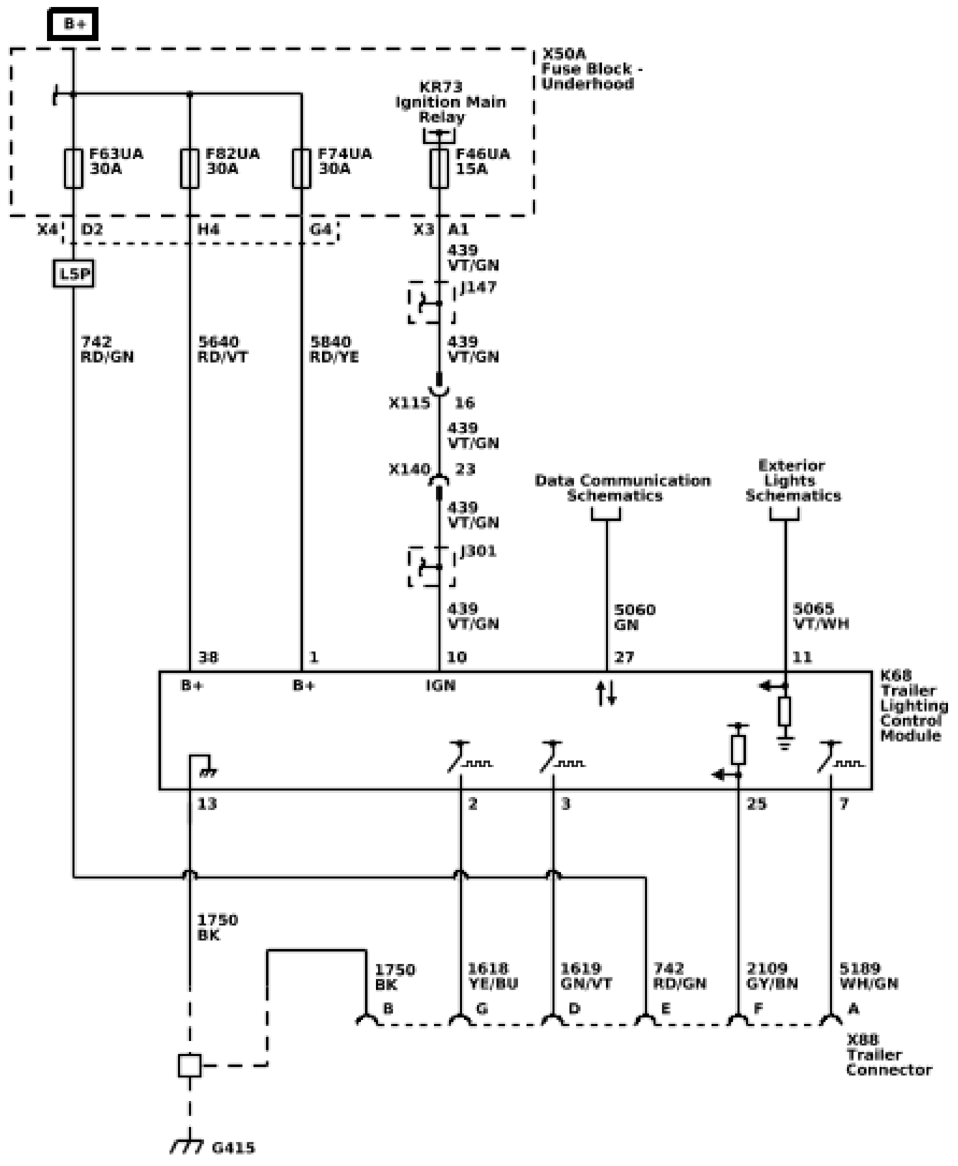
Trailering Systems

Schematic and Routing Diagrams

Trailering Systems Schematics (Trailer Connector Pins: A, B, D, E, F, G (Z82-U1D))

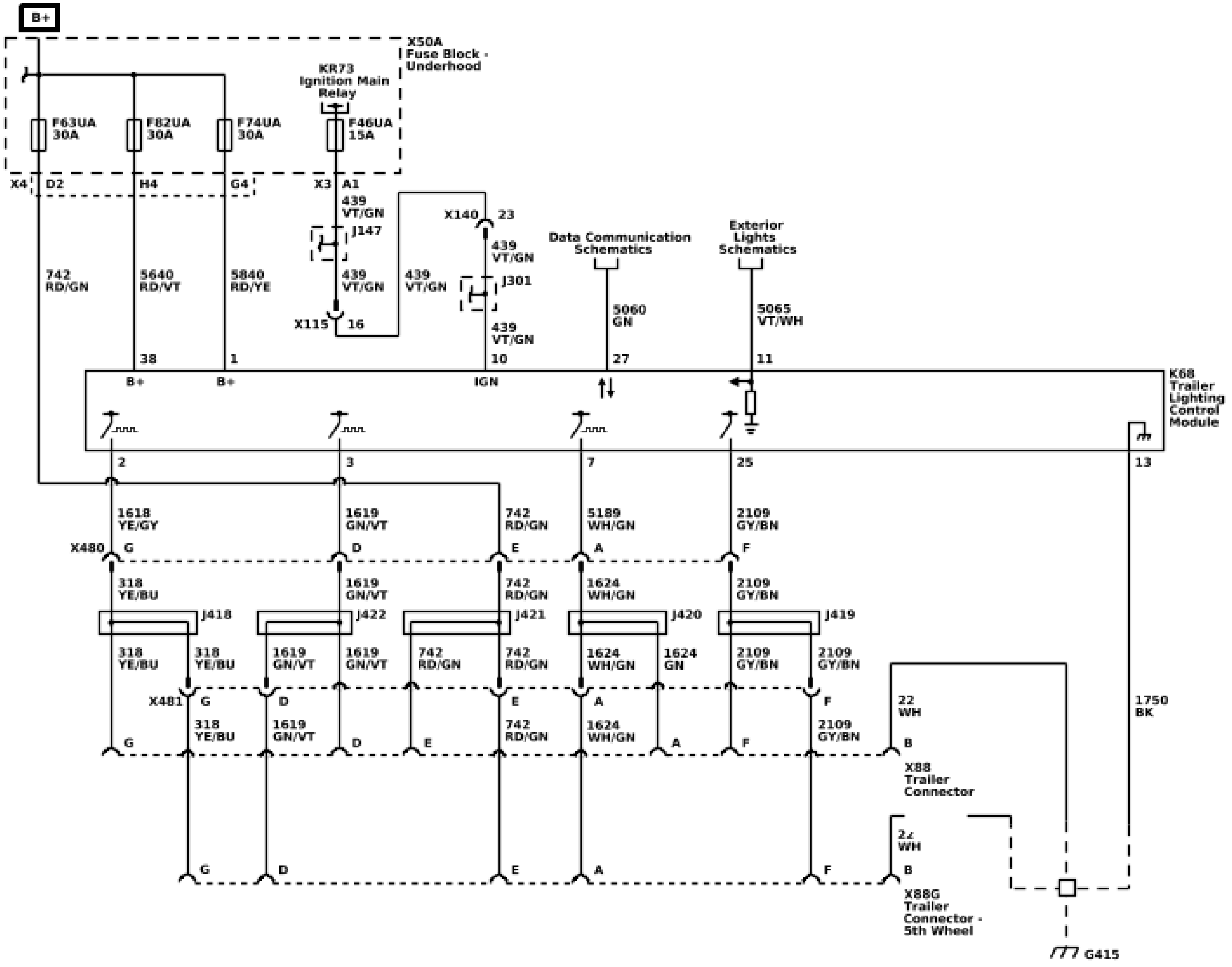

B+
X50A
Fuse Block - Underhood
KR63L
Trailer Stop/Turn Signal Lamp Relay - Left
KR63R
Trailer Stop/Turn Signal Lamp Relay - Right
KR53
Park Lamps Relay
KR61
Trailer Backup Lamps Relay
F73UA
10A
F81UA
10A
F63UA
30A
F41UA
20A
F55UA
10A
X4
G3
X2
C1
C2
X4
H3
D2
A3
B2
-K4B
B+
X50E
Fuse Block - Battery Auxiliary
F3UE
30A
X3
A
K4B
318
YE/BU
5186
BU/WH
5187
YE/GY
1619
GN/VT
742
RD/GN
2109
GY/BN
1624
WH/GN
742
RD/GN
X5
8
17
K9
Body Control Module
L5P
L8T
742
RD/GN
742
RD/GN
X103
1
742
RD/GN
742
RD/GN
B
G
D
E
F
A
X88
Trailer Connector
22
WH
G415
5995578

Trailering Systems Schematics (Trailer Connector Pins: A, B, D, E, F, G (U1D))


B+
X50A
Fuse Block -
Underhood
KR73
Ignition Main
Relay
F63UA
30A
F82UA
30A
F74UA
30A
F46UA
15A
X4
D2
H4
G4
X3
A1
LSP
439
VT/GN
J147
742
RD/GN
5640
RD/VT
5840
RD/YE
X115
16
X140
23
Data Communication
Schematics
Exterior
Lights
Schematics
J301
5060
GN
5065
VT/WH
38
1
10
27
11
B+
B+
IGN
K68
Trailer
Lighting
Control
Module
13
2
3
25
7
1750
BK
1618
YE/BU
1619
GN/VT
742
RD/GN
2109
GY/BN
5189
WH/GN
B
G
D
E
F
A
X88
Trailer
Connector
G415

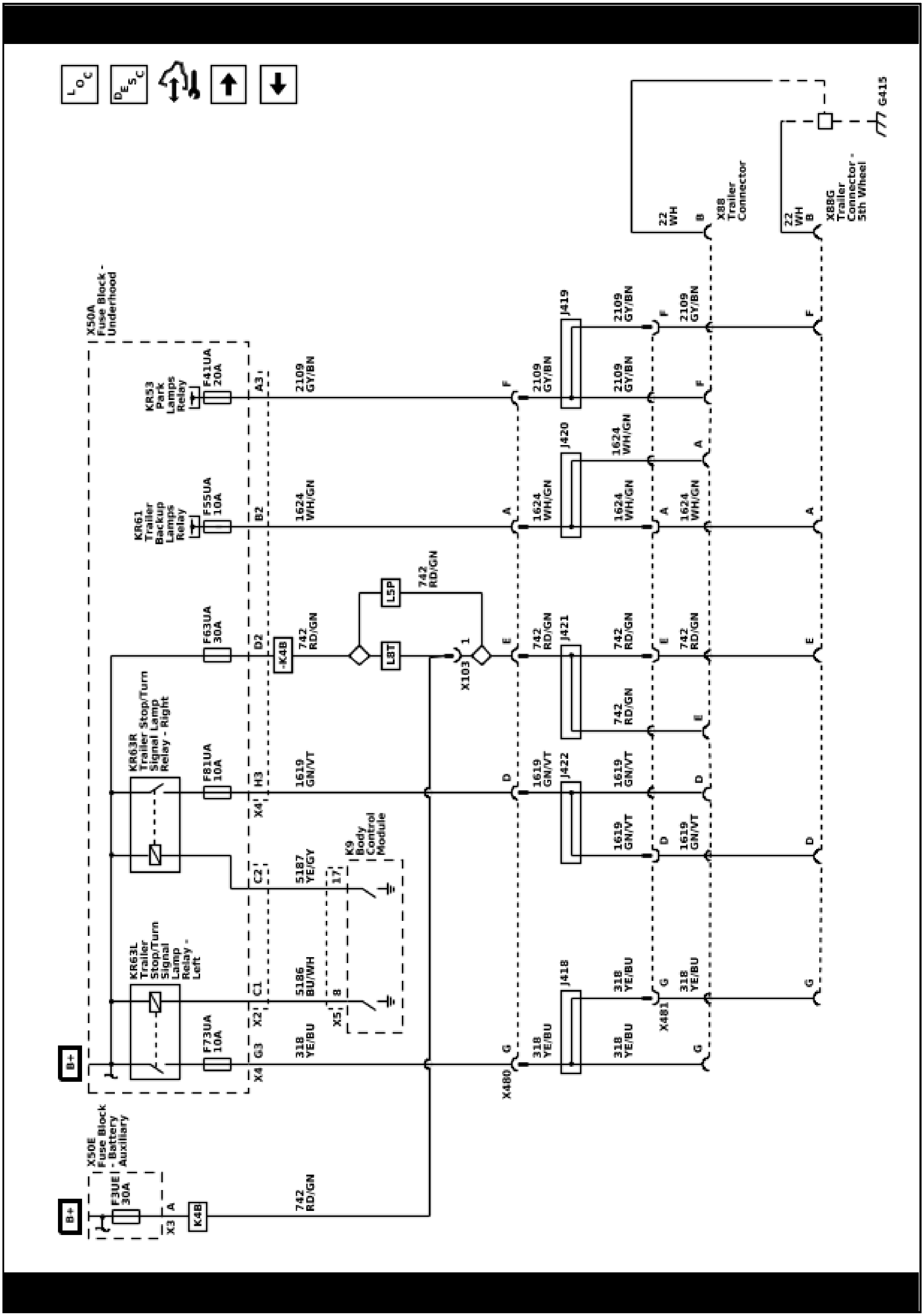
5995579

Trailering Systems Schematics (Trailer Connector Pins: A, B, D, E, F, G (U1D+UY2))

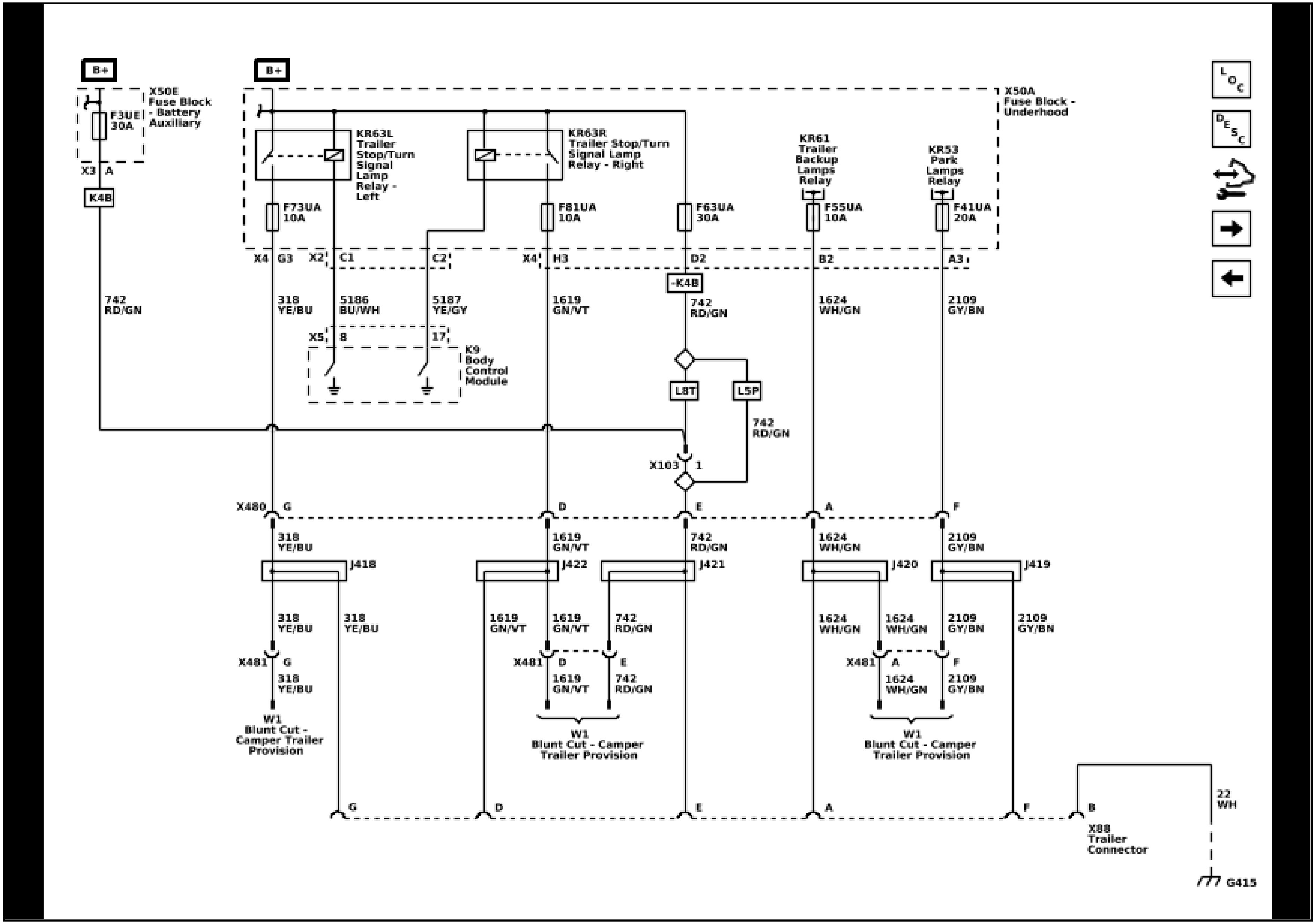

B+
X50A
Fuse Block - Underhood
KR73
Ignition Main Relay
F63UA 30A
F82UA 30A
F74UA 30A
F46UA 15A
X4
D2
H4
G4
X3
A1
439 VT/GN
J147
439 VT/GN
X115
16
439 VT/GN
X140
23
439 VT/GN
J301
439 VT/GN
742 RD/GN
5640 RD/VT
5840 RD/YE
Data Communication Schematics
5060 GN
Exterior Lights Schematics
5065 VT/WH
38
1
10
27
11
B+
B+
IGN
K68 Trailer Lighting Control Module
2
3
7
25
13
1618 YE/GY
1619 GN/VT
742 RD/GN
5189 WH/GN
2109 GY/BN
X480
G
D
E
A
F
318 YE/BU
1619 GN/VT
742 RD/GN
1624 WH/GN
2109 GY/BN
J418
J422
J421
J420
J419
318 YE/BU
318 YE/BU
1619 GN/VT
1619 GN/VT
742 RD/GN
742 RD/GN
1624 WH/GN
1624 GN
2109 GY/BN
2109 GY/BN
X481
G
D
E
A
F
318 YE/BU
1619 GN/VT
742 RD/GN
1624 WH/GN
2109 GY/BN
22 WH
1750 BK
G
D
E
A
F
B
X88 Trailer Connector
22 WH
G
D
E
A
F
B
X88G Trailer Connector - 5th Wheel
G415

5995580

Trailering Systems Schematics (Trailer Connector Pins: A, B, D, E, F, G (UY2-U1D))

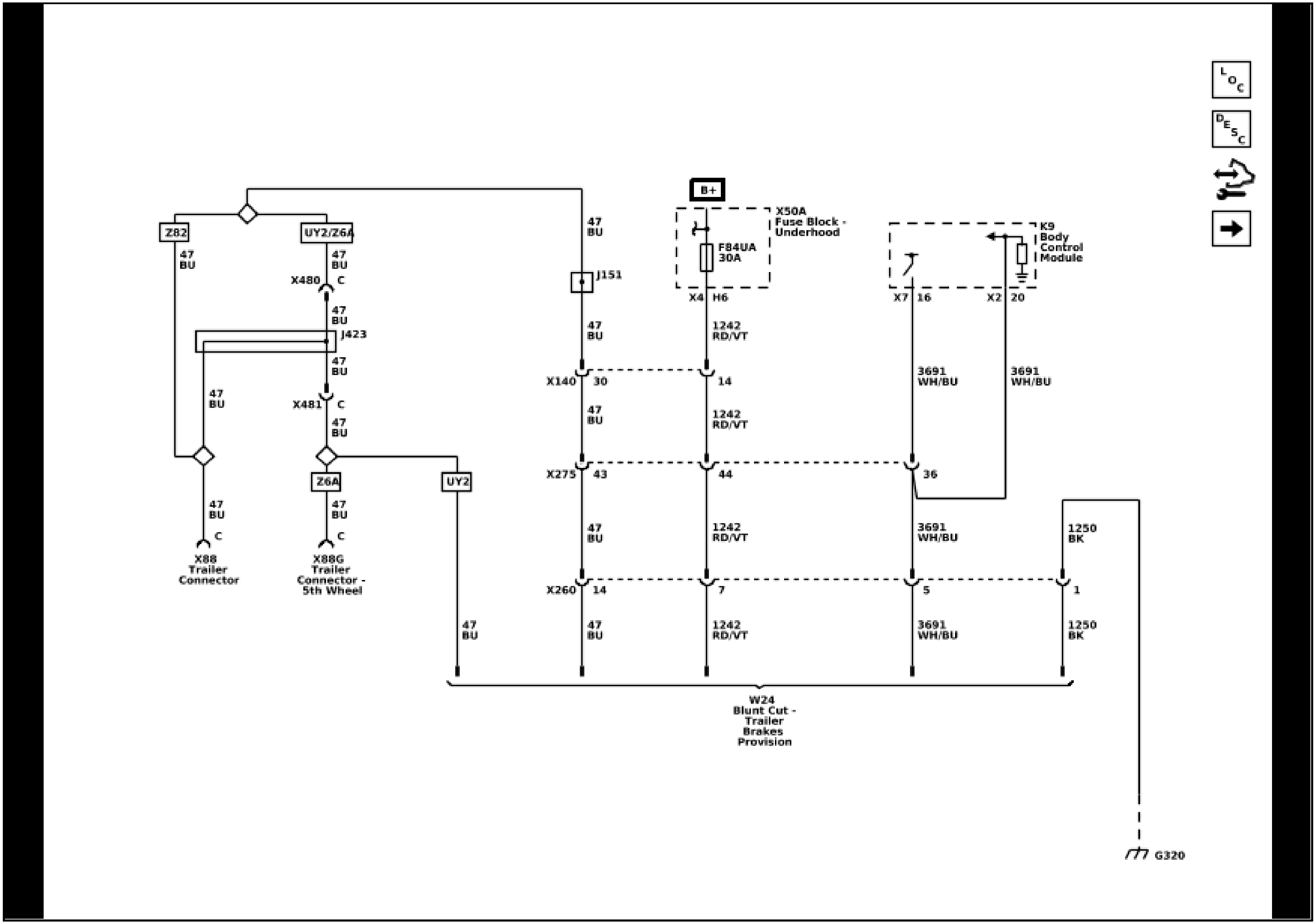

5995581
B+
X50E Fuse Block - Battery Auxiliary
F3UE 30A
X3
A
K4B
742 RD/GN
X50A Fuse Block - Underhood
B+
F73UA 10A
X4
G3
318 YE/BU
KR63L Trailer Stop/Turn Signal Lamp Relay - Left
X2
C1
5186 BU/WH
X5
8
KR63R Trailer Stop/Turn Signal Lamp Relay - Right
C2
5187 YE/GY
17
K9 Body Control Module
F81UA 10A
X4
H3
1619 GN/VT
F63UA 30A
D2
-K4B
742 RD/GN
L8T
L5P
742 RD/GN
X103
1
KR61 Trailer Backup Lamps Relay
F55UA 10A
B2
1624 WH/GN
KR53 Park Lamps Relay
F41UA 20A
A3
2109 GY/BN
X480
G
D
E
A
F
J418
J422
J421
J420
J419
318 YE/BU
1619 GN/VT
742 RD/GN
1624 WH/GN
2109 GY/BN
X481
22 WH
B
X88 Trailer Connector
X88G Trailer Connector - 5th Wheel
G415

Trailering Systems Schematics (Trailer Connector Pins: A, B, D, E, F, G (Z6A))


B+
X50E
Fuse Block - Battery Auxiliary
F3UE
30A
X3
A
K4B
742
RD/GN
B+
X50A
Fuse Block - Underhood
KR63L
Trailer Stop/Turn Signal Lamp Relay - Left
KR63R
Trailer Stop/Turn Signal Lamp Relay - Right
KR61
Trailer Backup Lamps Relay
KR53
Park Lamps Relay
F73UA
10A
F81UA
10A
F63UA
30A
F55UA
10A
F41UA
20A
X4
G3
X2
C1
C2
X4
H3
D2
B2
A3
-K4B
318
YE/BU
5186
BU/WH
5187
YE/GY
1619
GN/VT
742
RD/GN
1624
WH/GN
2109
GY/BN
X5
8
17
K9
Body Control Module
L8T
L5P
742
RD/GN
X103
1
X480
G
D
E
A
F
318
YE/BU
1619
GN/VT
742
RD/GN
1624
WH/GN
2109
GY/BN
J418
J422
J421
J420
J419
318
YE/BU
318
YE/BU
1619
GN/VT
1619
GN/VT
742
RD/GN
1624
WH/GN
1624
WH/GN
2109
GY/BN
2109
GY/BN
X481
G
318
YE/BU
X481
D
E
1619
GN/VT
742
RD/GN
X481
A
F
1624
WH/GN
2109
GY/BN
W1
Blunt Cut - Camper Trailer Provision
W1
Blunt Cut - Camper Trailer Provision
W1
Blunt Cut - Camper Trailer Provision
G
D
E
A
F
B
X88
Trailer Connector
22
WH
G415
L O C
D E S C

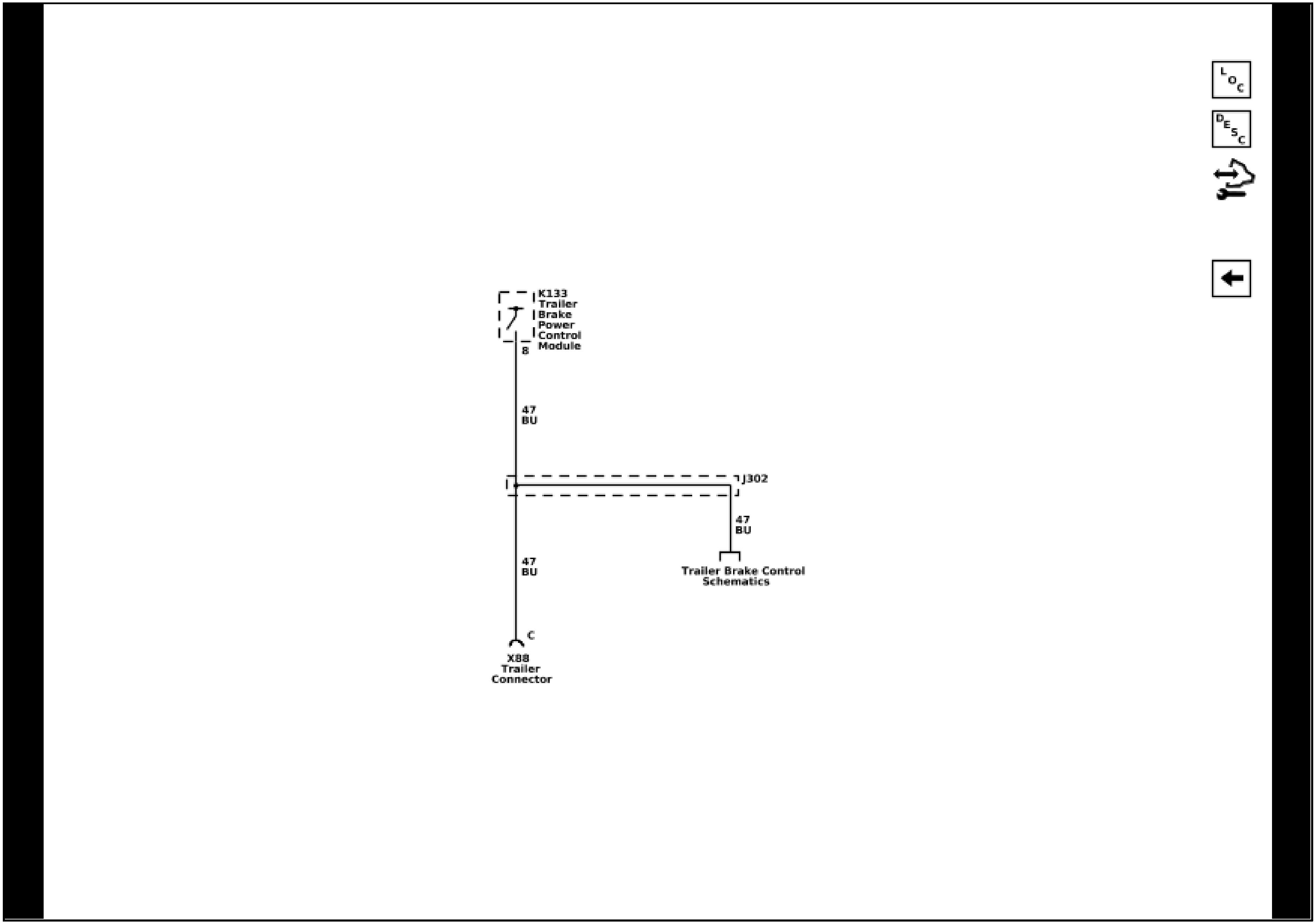
5995582

Trailering Systems Schematics (Trailer Connector Pin: C (Z82+UY2/Z6A))


Z82
UY2/Z6A
47 BU
X480 C
J423
X481 C
Z6A
UY2
X88 Trailer Connector
X88G Trailer Connector - 5th Wheel
J151
X140 30
X275 43
X260 14
B+
X50A Fuse Block - Underhood
F84UA 30A
X4 H6
1242 RD/VT
14
44
7
K9 Body Control Module
X7 16
X2 20
3691 WH/BU
36
5
1250 BK
1
W24 Blunt Cut - Trailer Brakes Provision
G320

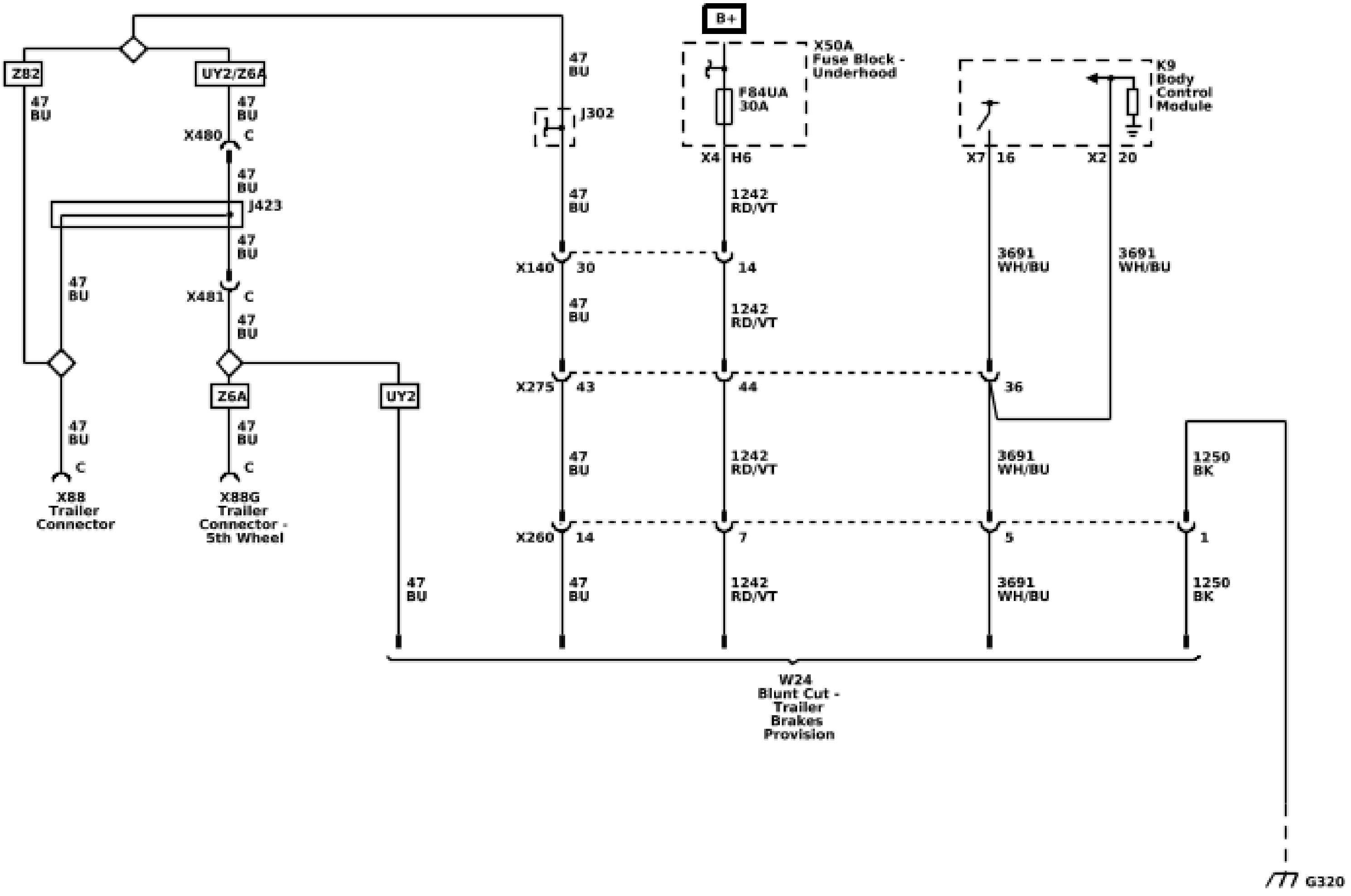
5995583

Trailering Systems Schematics (Trailer Connector Pin: C (JL1-Z82))


K133
Trailer
Brake
Power
Control
Module
8
47
BU
J302
47
BU
47
BU
Trailer Brake Control
Schematics
C
X88
Trailer
Connector

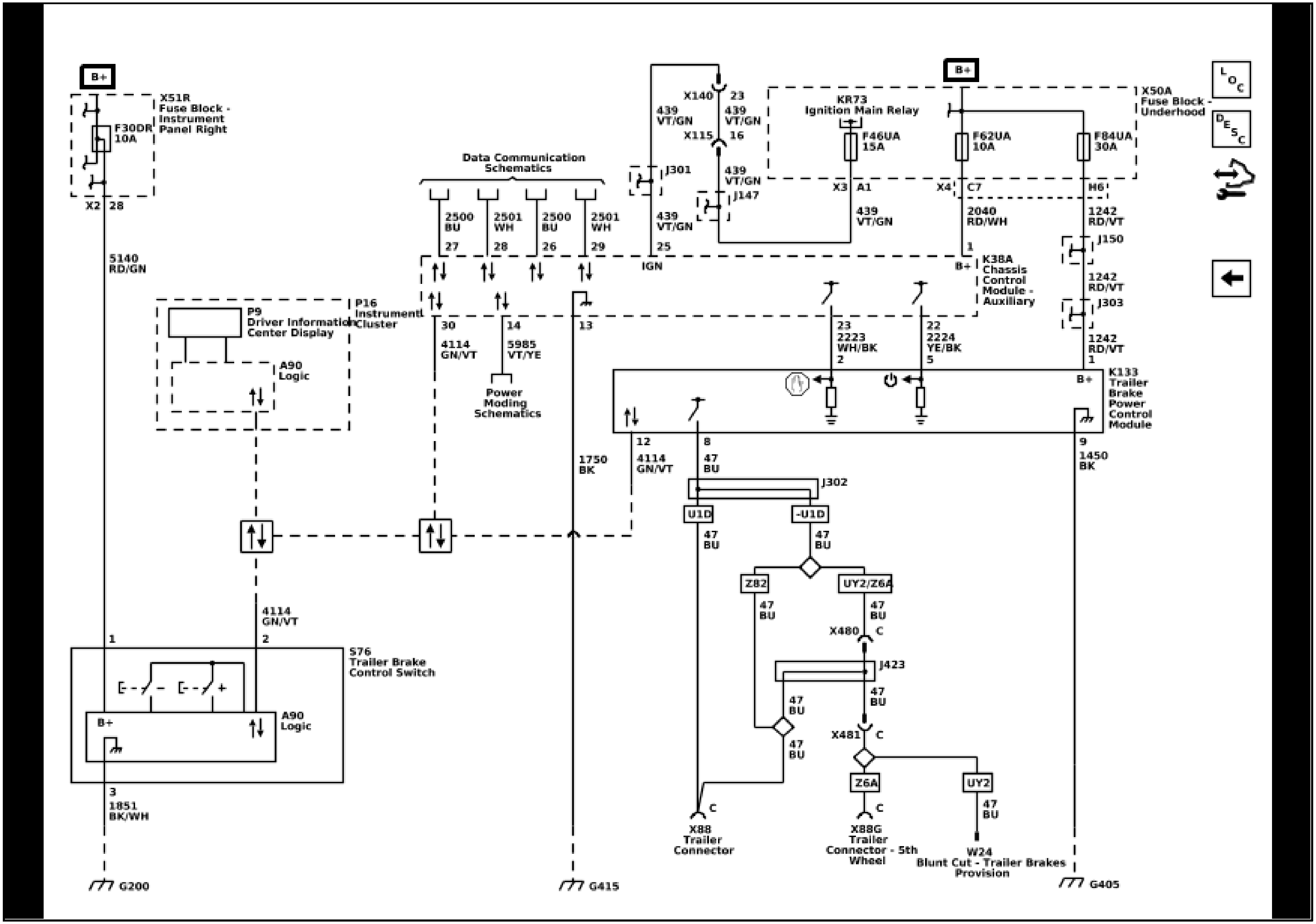
5995584

Trailering Systems Schematics (Trailer Brake (Z82-JL1/U1D))


Z82
UY2/Z6A
47 BU
X480 C
J423
X481 C
Z6A
UY2
X88 Trailer Connector
X88G Trailer Connector - 5th Wheel
J302
B+
X50A Fuse Block - Underhood
F84UA 30A
X4 H6
1242 RD/VT
K9 Body Control Module
X7 16
X2 20
3691 WH/BU
X140 30
14
X275 43
44
36
X260 14
7
5
1
1250 BK
W24 Blunt Cut - Trailer Brakes Provision
G320

5995585

Trailering Systems Schematics (Trailer Brake (JL1))


B+
X51R
Fuse Block - Instrument Panel Right
F30DR
10A
X2 28
5140
RD/GN
Data Communication Schematics
2500 BU 27
2501 WH 28
2500 BU 26
2501 WH 29
X140 23
439 VT/GN
X115 16
J301
J147
439 VT/GN 25
IGN
B+
X50A
Fuse Block - Underhood
KR73
Ignition Main Relay
F46UA
15A
F62UA
10A
F84UA
30A
X3 A1
X4 C7
H6
439 VT/GN
2040 RD/WH 1
1242 RD/VT
J150
J303
1242 RD/VT 1
K38A
Chassis Control Module - Auxiliary
P9
Driver Information Center Display
P16
Instrument Cluster
A90
Logic
30
4114 GN/VT
14
5985 VT/YE
Power Moding Schematics
13
1750 BK
23
2223 WH/BK 2
22
2224 YE/BK 5
K133
Trailer Brake Power Control Module
B+
12
4114 GN/VT
8
47 BU
9
1450 BK
J302
U1D
-U1D
Z82
UY2/Z6A
X480 C
J423
X481 C
Z6A
UY2
47 BU
X88
Trailer Connector
X88G
Trailer Connector - 5th Wheel
W24
Blunt Cut - Trailer Brakes Provision
4114 GN/VT
1
2
S76
Trailer Brake Control Switch
A90
Logic
3
1851 BK/WH
G200
G415
G405
5995586

Description and Operation

Trailering Description and Operation

Trailering System Overview

Begin the trailering system diagnosis with Diagnostic System Check - Trailering. The Diagnostic System Check - Trailering will provide a complete strategy to locate and repair a vehicle trailering electrical fault. Not following this strategy may cause additional diagnostic time and/or misdiagnosis.

The trailering system consists of the following:

- Trailer Lighting, refer to Trailer Lamps Malfunction for additional diagnostic information.
- Trailer Brakes, refer to Trailer Brake Malfunction for additional diagnostic information.
- Trailer Battery Charging System, refer to Trailer Battery Charging Malfunction for additional diagnostic information.
- Trailer Detection, refer to Trailer Detection Malfunction for additional diagnostic information.
- Trailer Tire Pressure Monitoring System, refer to Trailer Tire Pressure Monitoring Malfunction for additional diagnostic information.
- Trailer Theft Detection.

When a trailer is detected on a vehicle equipped with side blind zone detection, rear park assist, and/or rear cross traffic alert, the vehicle will automatically turn these features off. These features are turned off to prevent false detections due to the trailer obstructing the view of the sensors.

Connecting Aftermarket Accessories

- Some aftermarket accessories that connect to the X88 Trailer Connector will be recognized by the vehicle as a trailer connected, even if the accessory is not a trailer. As a result, side blind zone detection, rear park assist, and/or rear cross traffic alert will be turned off anytime the vehicle detects a trailer/accessory is connected.
- Vehicles equipped with U1D have trailer theft detection that constantly monitors trailer connected status when enabled. This is done by randomly pulsing the lighting circuits of the trailer when the vehicle is parked. As a result, some aftermarket accessories may be turned ON/OFF when connected to the vehicle with theft detection enabled.
- Vehicles equipped with U1D use pulse width modulation voltage (PWM) for trailer lighting functions. Some aftermarket accessories are incompatible with PWM and may not function correctly when connected to the trailer lighting circuits of the vehicle.

Trailer Battery Charging System

Trailer battery charging is accomplished through constant battery voltage from the X50A Fuse Block – Underhood to the X88 Trailer Connector. Battery voltage is supplied to terminal E at the X88 Trailer Connector at all times. If equipped, the trailer battery will constantly be charged by the vehicle's electrical system anytime the trailer is connected. Some trailers require the B+ circuit to the X88 Trailer Connector for the trailer brakes to function.

Trailer Detection

Trailer Detection With U1D

The K68 Trailer Lighting Control Module constantly monitors for trailer connection status, this is accomplished through the lighting circuits of the trailer to determine if a trailer is connected. The total combined park lamps and stop/turn signal lamps of the trailer must draw a minimum of 55mA to be detected by the Trailer Lighting Control Module. With the key OFF, the Trailer Lighting Control Module will periodically pulse the lighting circuits of the trailer to verify it is still connected. Depending on the configuration of the trailer lights, the trailer lights may periodically flash as part of the trailer detection system. These flashes correspond to when the Trailer Lighting Control Module pulses the lighting circuits to ensure the trailer is still connected and is considered normal. When a trailer is connected, the Trailer Lighting Control Module senses the trailer connection and alerts the driver by requesting a trailer profile setup through the Trailering App, which is displayed on the infotainment screen. If a trailer is disconnected with the ignition ON, the vehicle will display multiple trailer lighting messages until a trailer is reconnected or the message is dismissed by the user.

Some trailers utilize a trailer mounted control module to operate some or all of the trailer lights. These trailers may use the B+ circuit from the trailer connector to power the trailer lighting circuits. These trailers will not be detected by the K68 Trailer Lighting Control Module and may require an additional trailer adaptor for the vehicle to recognize the trailer is connected.

Trailer Detection Without U1D

Vehicles without U1D monitor trailer connection status through the trailer brake system (JL1). The K133 Trailer Brake Power Control Module constantly monitors the trailer auxiliary control circuit from Terminal C at the X88 Trailer connector. When a trailer is connected with trailer brakes, the K133 Trailer Brake Power Control Module senses the connection and alerts the driver with a Trailer Connected message. If the K133 Trailer Brake Power Control Module senses a fault, or the trailer becomes disconnected, the vehicle will alert the driver with a Check Trailer Wiring message.

Trailer Lighting

With U1D

The K68 Trailer Lighting Control Module is responsible for controlling the trailer lighting on vehicles with U1D. The total combined park lamps and stop/turn signal lamps of the trailer must draw a minimum of 55mA to be detected by the Trailer Lighting Control Module, or else the Trailer Lighting Control Module will not control the lighting circuits to the trailer. The Trailer Lighting Control Module receives serial data messages from the K9 Body Control Module (BCM) indicating what lamps have been activated on the vehicle. The Trailer Lighting Control Module responds by applying pulse width modulated voltage (PWM) to the appropriate control circuits for the requested lamps illuminating the lamps on the attached trailer. The Trailer Lighting Control

Module constantly monitors for trailer connection status, trailer lighting faults, and trailer theft deterrent purposes. This is accomplished through the lighting circuits of the trailer to determine if a trailer is connected. With the key OFF, the Trailer Lighting Control Module will periodically pulse the lighting circuits of the trailer to verify it is still connected. The lights on the trailer may flash at different intervals with the key OFF depending on which type of lights the trailer is built with. If a trailer is disconnected with the key ON, the vehicle will display a trailer disconnected message until a trailer is reconnected or the ignition is cycled.

Without U1D

The K9 Body Control Module (BCM) is responsible for controlling the trailer lighting on vehicles without U1D. The BCM applies voltage or ground to the appropriate relay control circuits for the requested lamps anytime the vehicle lamps are commanded ON. With the relay coil energized, the relay contacts close and allow voltage to flow through the relay illuminating the appropriate lamps on the attached trailer.

North America 7–Way Trailer Connector Trailer Messages

The driver information center (P16 Instrument Cluster) or infotainment screen (P17 Info Display Module) may display one or more of the following messages to the user related to trailering.

North America 7–Way Trailer Connector

Trailering Message	Description
Check Trailer Left Turn Signal Lamp	The K68 Trailer Lighting Control Module detects a fault on the left trailer stop/turn lamp control circuit
Check Trailer Right Turn Signal Lamp	The K68 Trailer Lighting Control Module detects a fault on the right trailer stop/turn lamp control circuit
Check Trailer Rear Lamp	The K68 Trailer Lighting Control Module detects a fault on the trailer park lamp control circuit.
Check Trailer Reversing Lamp	The K68 Trailer Lighting Control Module detects a fault on the trailer backup lamp control circuit.
Check Trailer Brake Lamps	The K68 Trailer Lighting Control Module detects a fault on the left and/or right trailer stop/turn lamp control circuits
{JL1} Check Trailer Wiring	The K133 Trailer Brake Power Control Module detects a fault on the trailer brake control circuit or the trailer was disconnected.
Lane Change Alert Off	Reminder to the user that lane change alerts are turned off anytime a trailer is detected.
Rear Cross Traffic Alert Off	Reminder to the user that rear cross traffic alerts are turned off anytime a trailer is detected.
Rear Park Assist Off	Reminder to the user that rear park assist is turned off anytime a trailer is detected.
Remember to turn On Tow/Haul Mode	Reminder to the user to turn ON Tow/Haul Mode when towing.
{JL1} Service Trailer Brake System	The K133 Trailer Brake Power Control Module detects a fault on the trailer brake control circuit.
Service Trailer Tire Monitor System	The K214 Trailer Tire Pressure Indicator Module detects one or more issues with the trailer tire pressure monitoring system.
Trailer Detected	The K68 Trailer Lighting Control Module detects a trailer has been connected to the X88 Trailer Connector.
{JL1} Trailer Brakes Detected	The K133 Trailer Brake Power Control Module detects a trailer with trailer brakes has been connected to the X88 Trailer Connector.

North America 7–Way Trailer Connector (cont'd)

Trailering Message	Description
Trailer Disconnected Check Connection	The K68 Trailer Lighting Control Module detects a trailer has been disconnected from the X88 Trailer Connector.
Trailer Tire Pressure High	The K214 Trailer Tire Pressure Indicator Module detects one or more of the trailer tire pressures is high.
Trailer Tire Pressure Low	The K214 Trailer Tire Pressure Indicator Module detects one or more of the trailer tire pressures is low.
Trailer Tire Sensor Fault	The K214 Trailer Tire Pressure Indicator Module detects one or more of the trailer tire pressure sensors has a fault.
Trailer Tire Temperature High	The K214 Trailer Tire Pressure Indicator Module detects one or more of the trailer tire temperatures is too high.

Trailer Theft Detection (With U1D/UET Only)

Trailer theft monitoring can be turned ON and OFF through the vehicle Trailer App. When enabled, any time the trailer theft deterrent system is armed, the trailer lighting circuits are constantly monitored to determine if a trailer is connected for trailer theft deterrent purposes. With the key OFF, the K68 Trailer Lamp Control Module will randomly pulse the lighting circuits of the trailer to verify it is still connected by monitoring the voltage drop of the circuit. Depending on the configuration of the trailer lights, the trailer lights may randomly flash as part of the trailer theft deterrent function. These flashes correspond to when the K68 Trailer Lamp Control Module pulses the lighting circuits to ensure the trailer is still connected and is considered normal. If the trailer is disconnected while the trailer theft deterrent system is armed, the vehicle will flash the exterior lights and cycle the horn to alert of a trailer theft event.

Trailer Brakes (JL1)

The vehicle is equipped with the following trailer braking components:

- K160 Brake System Control Module
- K133 Trailer Brake Power Control Module
- S76 Trailer Brake Control Switch
- Trailer Brake Driver Information Center Display

A trailer brake control system is used to control the amount of trailer braking power that is made available to trailers with brakes that require a controlled electrical output signal for actuation.

The power output to the trailer brakes is based on both the amount of braking being applied by the vehicle’s brake system and on the type of trailer brakes detected.

The Trailer Brake Control System is compatible with two types of Trailer Brake Systems as listed below:

1. **Electric Brakes** A controlled electrical output signal energizes an electric-magnet/lever arm assembly that directly actuates the brake mechanism. The GDS name for this system is “Electromagnetic Brakes”.
2. **Electric Over Hydraulic Brakes** A controlled electrical output signal energizes a remote, trailer mounted hydraulic pump to build brake pressure in a closed hydraulic system on the trailer. The hydraulic fluid pressure actuates the brake mechanism. The GDS name for this system is “Electrohydraulic Brakes”.

Trailer Brake Output Versus Trailer Brake Type

- The trailer brake system characterizes the trailer brakes as either Electric Brake or Electric Over Hydraulic Brake automatically. This characterization may be affected by the number, type, and age of the trailer brake magnets, as well as any other devices installed on the trailer brakes (i.e. adapters for Electric Over Hydraulic brake functionality).
- The trailer brake system is fully operational with either characterization.
- Sliding the manual trailer brake apply lever will produce output at zero speed for either characterization.

The user gain allows the driver to adjust the amount of trailer brake output to match the trailer load and road surface. The controller determines the desired trailer brake output and provides a control signal to the K133 Trailer Brake Power Control Module (TBPM). The K133 Trailer Brake Power Control Module amplifies the signal and provides the output required to activate the Electric or Electric Over Hydraulic trailer brakes.

The trailer brake control can support up to a maximum of four axles with electric trailer brakes (8 brake magnets).

Connecting a trailer that is not compatible with the trailer brake system may result in reduced or complete loss of trailer braking. There may be an increase in stopping distance or trailer instability which could result in personal injury or damage to the vehicle, trailer or other property. An aftermarket controller may be available for use with incompatible trailer brake systems.

To determine the type of brakes on your trailer and the availability of controllers, check with your trailer manufacturer or dealer. Do not power up an aftermarket controller with the factory brake controller at the same time.

Trailer Brake Control Panel

The S76 Trailer Brake Control Switch contains the trailer gain and manual apply switches. It is located in the vehicle center stack. Refer to the owner’s manual for more information on the location. The control panel and switches allows you to adjust the amount of output, referred to as trailer gain, available to the Electric or

Electric Over Hydraulic brakes. It also allows you to manually apply the trailer brakes. The trailer brake control switch is used along with the trailer brake display page on the driver information center to adjust and display power output to the trailer brakes.

Manual Trailer Brake Apply

The manual trailer brake apply lever is located on the S76 Trailer Brake Control Switch and is used to apply the trailer's Electric or Electric Over Hydraulic brakes independent of the vehicle's brakes. This lever is used in the trailer gain adjustment procedure to properly adjust the power output to the trailer brakes.

Sliding the lever will apply only the trailer brakes. The power output to the trailer is indicated in the trailer brake display page in the Driver Information Center (DIC). If the vehicle's service brakes are applied while using the manual trailer brake apply lever, the trailer brake control output power will be the greater of the two.

The trailer and the vehicle's brake lamps will come on when either the vehicle's braking or manual trailer brakes are applied.

Trailer Brake Gain Adjustment

Trailer gain should be set for a specific trailering condition and must be adjusted any time vehicle loading, trailer loading or road surface conditions change. It is important to re-adjust trailer gain any time the tow vehicle, trailer loading or road surface conditions change or if you notice trailer wheel lock-up at any time while you are towing.

Setting the trailer gain properly is needed for the best trailer stopping performance. A trailer that is over-gained may result in locked trailer brakes. A trailer that is under-gained may result in not enough trailer braking. Both of these conditions may result in poor stopping and stability of the vehicle and trailer.

Trailer Gain Adjustment Procedure

- Adjust trailer gain in 0.5 step increments up to 10 gain setting by using the gain adjustment +/− buttons on the trailer brake control panel switch. Pressing and holding a gain button will cause the trailer gain to continuously increment or decrement. To turn the output to the trailer off, set the gain to zero.
- Drive the tow vehicle and trailer combination on a level surface representative of the towing condition and free of traffic at approximately 32–40 km/h (20–25 mph) and fully apply the manual trailer brake apply lever mechanism located on the trailer brake control panel switch. Adjusting the trailer gain at slower speeds may result in an incorrect gain setting.
- Adjust the trailer gain to just below the threshold of trailer wheel lock-up . Trailer wheel lock-up may not occur if towing a heavily loaded trailer. In this case, adjust the trailer gain to the highest allowable setting for the towing condition.

Trailer Brake Gain and Output Display

This display menu can be accessed by scrolling through the DIC menu, or any time the trailer gain +/− button is depressed, or the manual trailer brake apply lever is actuated. The trailer output is displayed from 0 to full output and indicates the output power provided to the trailer brakes, relative to the gain setting.

After the electrical connection is made to a trailer equipped with electric brakes or electric over hydraulic brakes, the TRAILER CONNECTED message will be displayed momentarily on the DIC. The Trailer Brake Display Page can be selected on the DIC showing TRAILER GAIN and OUTPUT, after all vehicle related service messages are acknowledged by the driver. Depending on which instrument panel cluster is in the vehicle, the DIC may display dashed lines, a greyed out display, or it may be blank signifying a disconnected trailer or a trailer brake fault condition.

Trailer Brake Driver Information Center Indicators and Messages

The following indicators are used to inform the driver of several different conditions:

Trailer Connected

This message will be briefly displayed when a trailer with Electric or Electric Over Hydraulic brakes is first connected to the vehicle. This message will automatically turn off in about ten seconds. The driver can also acknowledge this message before it automatically turns off.

Check Trailer Wiring

This message will be displayed if:

- The system detects that a trailer with Electric or Electric Over Hydraulic brakes is connected to the vehicle and then the trailer harness becomes disconnected from the vehicle.
- The trailer connection is recognized initially and then a disconnect occurs while the vehicle is stationary. This message will automatically turn off in about thirty seconds. This message will also turn off if the driver selects to turn this message off or if the trailer harness is reconnected.
- A disconnect of the trailer wiring harness occurs while the vehicle is moving. The Check Trailer Wiring message will continue until the ignition is turned off. The message will also turn off if the driver selects to turn this message off or it the trailer harness is re-connected.
- There is an electrical fault in the wiring to the electric trailer brakes. The Check Trailer Wiring message will continue as long as there is an electrical fault in the trailer wiring. This message will also turn off if the driver acknowledges this message off.
- A poor connection at the 7–way connector may cause the Check Trailer Wiring message. Some aftermarket 7–way trailer side connector adapters or plugs may cause deformation or excessive wear to the vehicle's trailer terminals. It is recommended that you use an OEM or Pollak heavy duty 7–way trailer side connector adapter.

Service Trailer Brake System

This message will be displayed when there is a problem with the trailer brake control system. The trailer brake system may not be fully functional, or may not be functioning at all. The trailer brake system is designed to provide trailer braking, if possible, even when faults prevent it from being fully functional. This reduced functionality includes:

1. Providing trailer braking when the master cylinder pressure or brake pedal switch are faulted.
2. Providing trailer braking when hill start assist and trailer sway control communication is faulted.
3. Providing trailer braking when certain manual trailer brake apply lever faults are present.

Trailer Tire Pressure Monitoring

Special Tools

- *EL-46079/J-46079* Tire Pressure Monitor Diagnostic Tool
- *EL-50448* Tire Pressure Monitor Sensor Activation Tool
- *EL-52641* Trailer Presence Simulator Tool

For equivalent regional tools, refer to Special Tools

The Trailer Tire Pressure Monitor System is designed to monitor the pressure of the trailer tires, and warn the driver when a low pressure condition exists. Four Trailer Tire Pressure Monitor System sensors may be provided in the vehicle's glove box as an accessory when equipped. The system can accommodate a trailer with up to (6) tires if additional sensors are purchased from the dealership. Also, the system can be paired with up to (5) individual trailers. The sensors must be mounted onto each tire and wheel assembly, and the sensors must be learned by the vehicle by following the learning procedure as shown in the Trailering App section of this manual. For sensor installation assistance, please contact your trailer service center or tire service center. The Trailer Tire Pressure Monitor System sensors monitor the air pressure in the trailer tires and transmit the trailer tire pressure readings to a receiver located in the vehicle. The trailer tire pressure sensors can transmit up to 23 feet (7 meters) from the hitch receiver of the vehicle. The tire pressure values can be viewed in the trailering app in the vehicle's center stack.

Trailering Diagnostic Tools

In some situations when diagnosing trailer tire pressure monitoring, trailer lighting, or integrated trailer brakes, it may be necessary to connect the vehicle to a trailer to confirm proper operation. Performing this activity may prove difficult in the service environment since trailers are not often available for diagnostic use, may have existing electrical issues outside of the issues a technician is attempting to diagnose, or simply may be too unwieldily to connect for diagnosis.

With all this in mind, it may be helpful to build or create a tool that can be plugged into the vehicle's trailer connector and simulate a connected trailer. This tool would include park lamps, stop lamps, and a reverse lamp for lighting and trailer tire pressure monitoring diagnosis. It can be expanded to include trailer brake magnets to diagnose integrated trailer brake concerns. Also, an additional lamp can be included to diagnose the B+ circuit to the trailer.

Trailer issues are NOT covered under warranty, but these tools may be used to verify the vehicle is functioning properly and to help the customer understand and correct any trailer related issues if they so choose.

Available Trailer Presence Simulator Tool

Illustration	Tool Number/Description
 5166189	*EL-52641* Trailer Presence Simulator Tool

Simulated Trailer Lighting

Creating a tool to simulate a connected trailer can be used to diagnose issues with trailer lighting, trailer brake (if equipped), the Trailering App (if equipped), and trailer tire pressure monitoring system (if equipped).

If the vehicle is equipped with a K68 Trailer Lighting Control Module (U1D), the module monitors the current on the lighting circuits to determine a trailer has been connected. The Trailer Lighting Control Module pulses current on the trailer lighting circuits every 10–15 s to monitor for a connected trailer. If a current draw greater than 55mA is detected, the Trailer Lighting Control Module recognizes this as a connected trailer. This will enable any trailer lighting controlled by the Trailer Lighting Control Module. If the vehicle is also equipped with trailer tire pressure monitoring, the Trailer Lighting Control Module will also use this trailer detection as a cue to send out a serial data message to enable the Trailering App and trailer tire pressure monitoring functions.

Creating a Simulated Trailer Lighting Tool

Parts needed:

- 7-way RV trailer connector Qty: 1

  Note: The combination trailer park/stop/turn lamp must draw at least 55mA of current to be detected as a trailer. Some LED combination lamps will not draw enough current. If an LED combination lamp is used, make sure it draws at least 55mA. A load resistor can be added to the lighting circuits of the trailer if necessary to obtain the correct load.

- Combination trailer park/stop/turn lamp (greater than 55mA drawn when on) Qty: 2
- Reverse lamp Qty: 1
- 12 gauge wire and terminals/connectors Qty: As needed

- 18 gauge wire and terminals/connectors Qty: As needed
- Mounting board Qty: 1

1. Connect a 12 gauge wire to the ground terminal of the 7-way trailer connector and the ground circuit of each combination trailer park/stop/turn lamp and the reverse lamp in parallel.
2. Connect an 18 gauge wire between the park lamp terminal of the 7-way trailer connector and the park lamp circuit of each combination trailer park/stop/turn lamp in parallel.
3. Connect an 18 gauge wire between the left turn/stop lamp terminal of the 7-way trailer connector and the turn/stop lamp circuit of left trailer park/stop/turn lamp.
4. Connect an 18 gauge wire between the right turn/stop lamp terminal of the 7-way trailer connector and the turn/stop lamp circuit of right trailer park/stop/turn lamp.
5. Connect an 18 gauge wire between the reverse lamp terminal of the 7-way trailer connector and the reverse lamp.

   Note: A combination trailer lighting and trailer brake tool can be created on the same mounting board.
6. Mount the left combination trailer park/stop/turn lamp, right combination trailer park/stop/turn lamp, and reverse lamp to the mounting board.
7. Plug the 7-way RV trailer connector to the vehicle and verify functionality.

Simulated Trailer Brakes

Creating a tool to simulate trailer brakes can be used to diagnose trailer brake issues.

The trailer brake control system is compatible with two types of trailer brake systems: electromagnetic or electro-over hydraulic trailer brakes. The Brake System Control Module must determine which type of brakes the trailer is equipped with so the system can output correctly for the trailer's brake system. Because the Brake System Control Module has to determine the type of trailer brake system that is being used, it can be sensitive to a variety of trailer wiring issues.

The Trailer Brake Power Control Module continuously sends a test pulse out on the trailer brake control circuit (circuit 47) to determine if a trailer with trailer brakes has been connected. How the pulse reacts when a trailer is connected is how the Trailer Brake Power Control Module determines which type of braking system the trailer is equipped with.

Even after the system detects the trailer, Trailer Brake Power Control Module will continue to send this test pulse on the trailer brake control circuit, which now is monitoring both the truck and trailer circuitry. The trailer brake control circuit continues to be monitored for any faults so the driver can be notified of any issues that may occur within the truck or trailer, as well as, to determine when the trailer is disconnected from the truck.

Creating a Simulated Trailer Brake Tool

Parts needed:

- 7-way RV trailer connector Qty: 1
- Electric trailer brake magnets Qty: 2, 4, 6, or 8
- Reverse lamp Qty: 1
- Mounting board Qty: 1
- 12 gauge wire and terminals/connectors Qty: As needed

1. Connect a 12 gauge wire to the ground terminal of the 7-way trailer connector.
2. Connect a 12 gauge wire to the brake controller output terminal of the 7-way trailer connector.

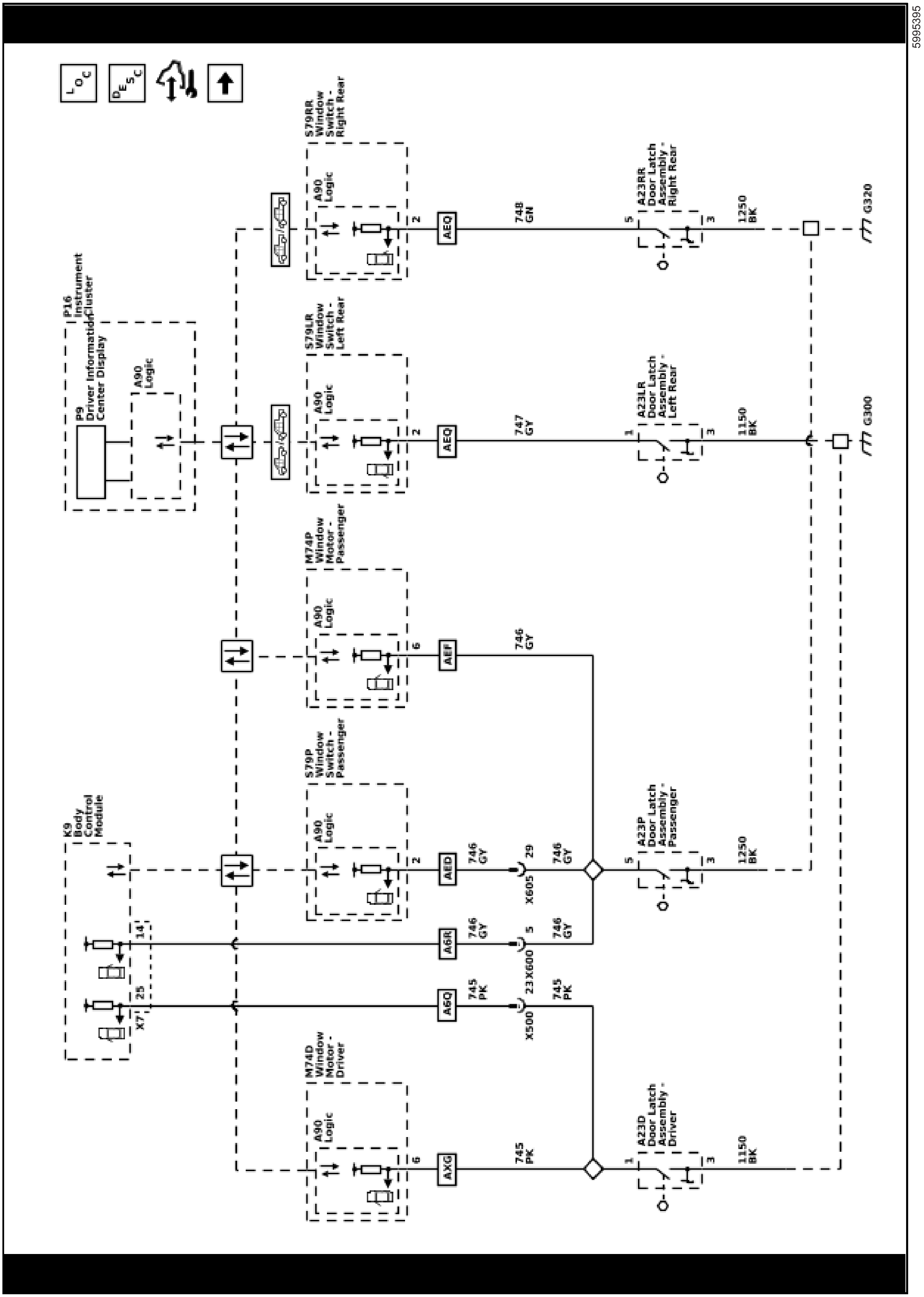
   Note: The trailer brake magnets must be connected in parallel. Connecting in series will create an excessive current draw and disable the trailer brake system.
3. Connect the trailer brake magnets to the 12 gauge wires from the 7-way trailer connector in parallel.

   Note: A combination trailer lighting and trailer brake tool can be created on the same mounting board.
4. Mount the trailer brake magnets to the mounting board.
5. Plug the 7-way RV trailer connector to the vehicle and verify functionality.

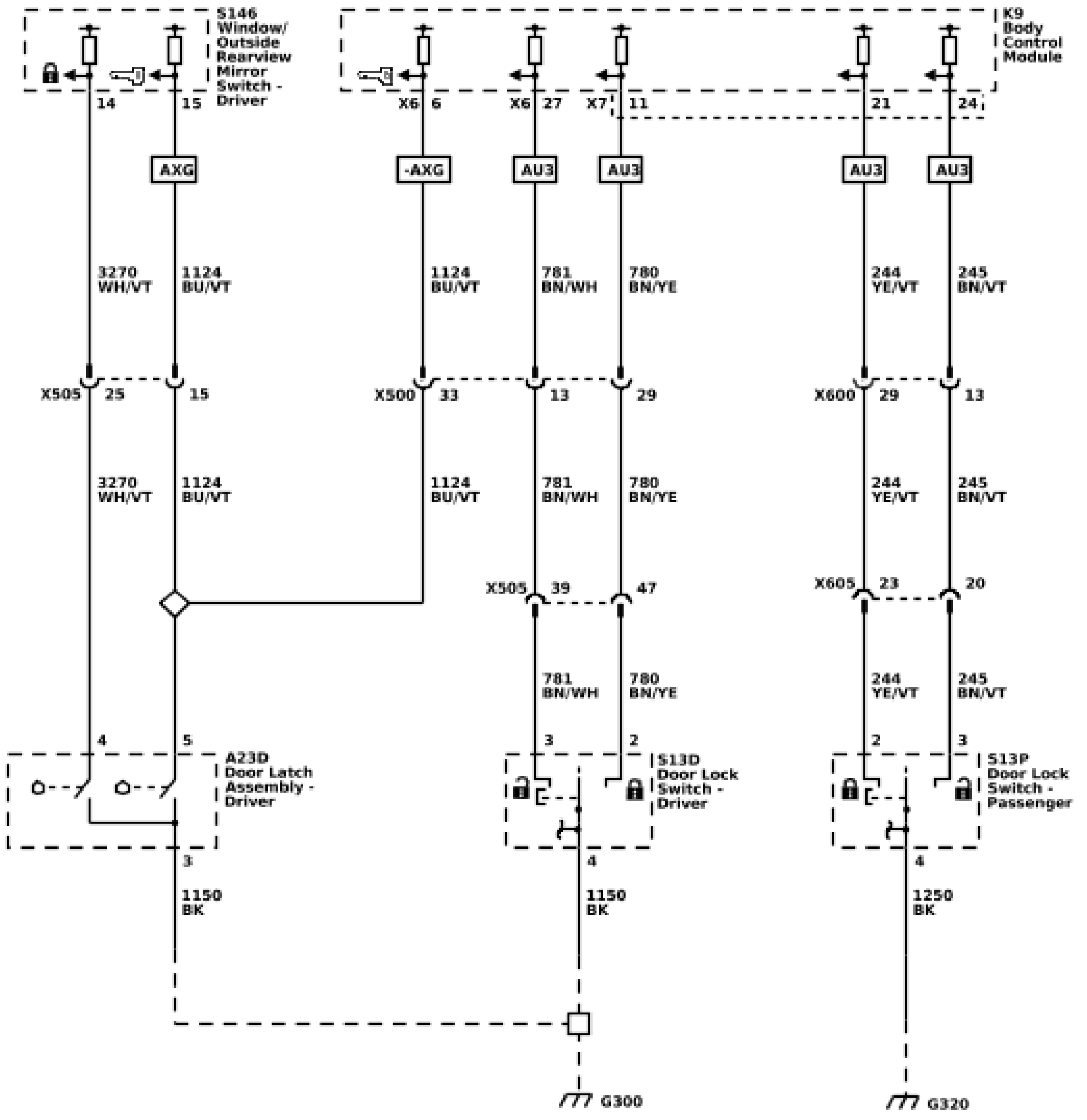
Vehicle Access

Schematic and Routing Diagrams

Door Lock/Indicator Schematics (Ajar Switches)

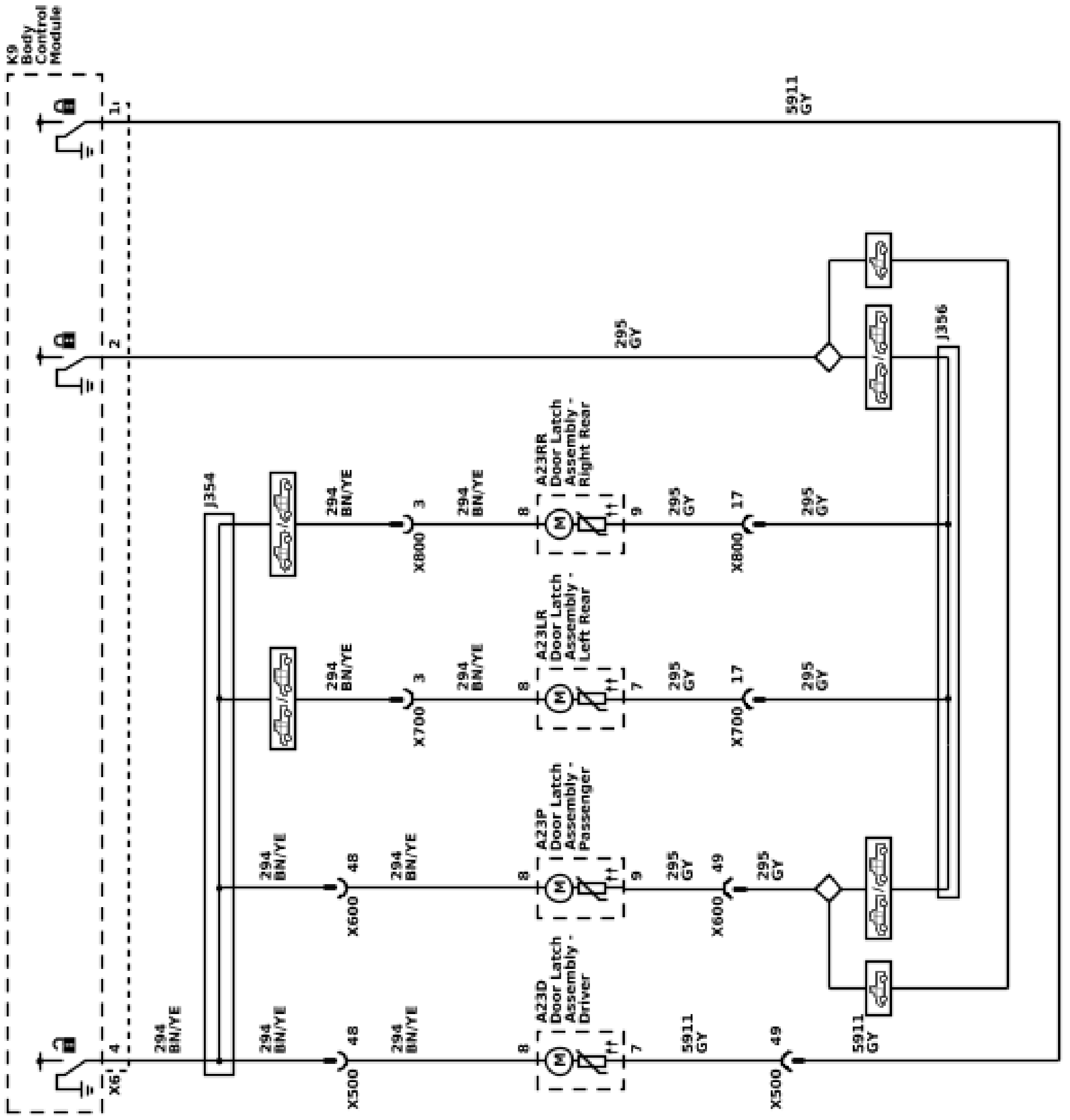

5995395
K9 Body Control Module
X7
25
14
P16 Instrument Cluster
P9 Driver Information Center Display
A90 Logic
M74D Window Motor - Driver
S79P Window Switch - Passenger
M74P Window Motor - Passenger
S79LR Window Switch - Left Rear
S79RR Window Switch - Right Rear
6
2
6
2
2
AXG
A6Q
A6R
AED
AEF
AEQ
AEQ
745 PK
745 PK
745 PK
746 GY
746 GY
746 GY
746 GY
746 GY
747 GY
748 GN
X500
23 X600
5
X605
29
A23D Door Latch Assembly - Driver
A23P Door Latch Assembly - Passenger
A23LR Door Latch Assembly - Left Rear
A23RR Door Latch Assembly - Right Rear
1
5
1
5
3
1150 BK
1250 BK
1150 BK
1250 BK
G300
G320

Door Lock/Indicator Schematics (Controls and Lock Indicators)


S146 Window/ Outside Rearview Mirror Switch - Driver
14
15
AXG
3270 WH/VT
1124 BU/VT
X505
25
15
3270 WH/VT
1124 BU/VT
4
5
A23D Door Latch Assembly - Driver
3
1150 BK
K9 Body Control Module
X6
6
X6
27
X7
11
21
24
-AXG
AU3
AU3
AU3
AU3
1124 BU/VT
781 BN/WH
780 BN/YE
244 YE/VT
245 BN/VT
X500
33
13
29
X600
29
13
1124 BU/VT
781 BN/WH
780 BN/YE
244 YE/VT
245 BN/VT
X505
39
47
X605
23
20
781 BN/WH
780 BN/YE
244 YE/VT
245 BN/VT
3
2
S13D Door Lock Switch - Driver
4
1150 BK
2
3
S13P Door Lock Switch - Passenger
4
1250 BK
G300
G320

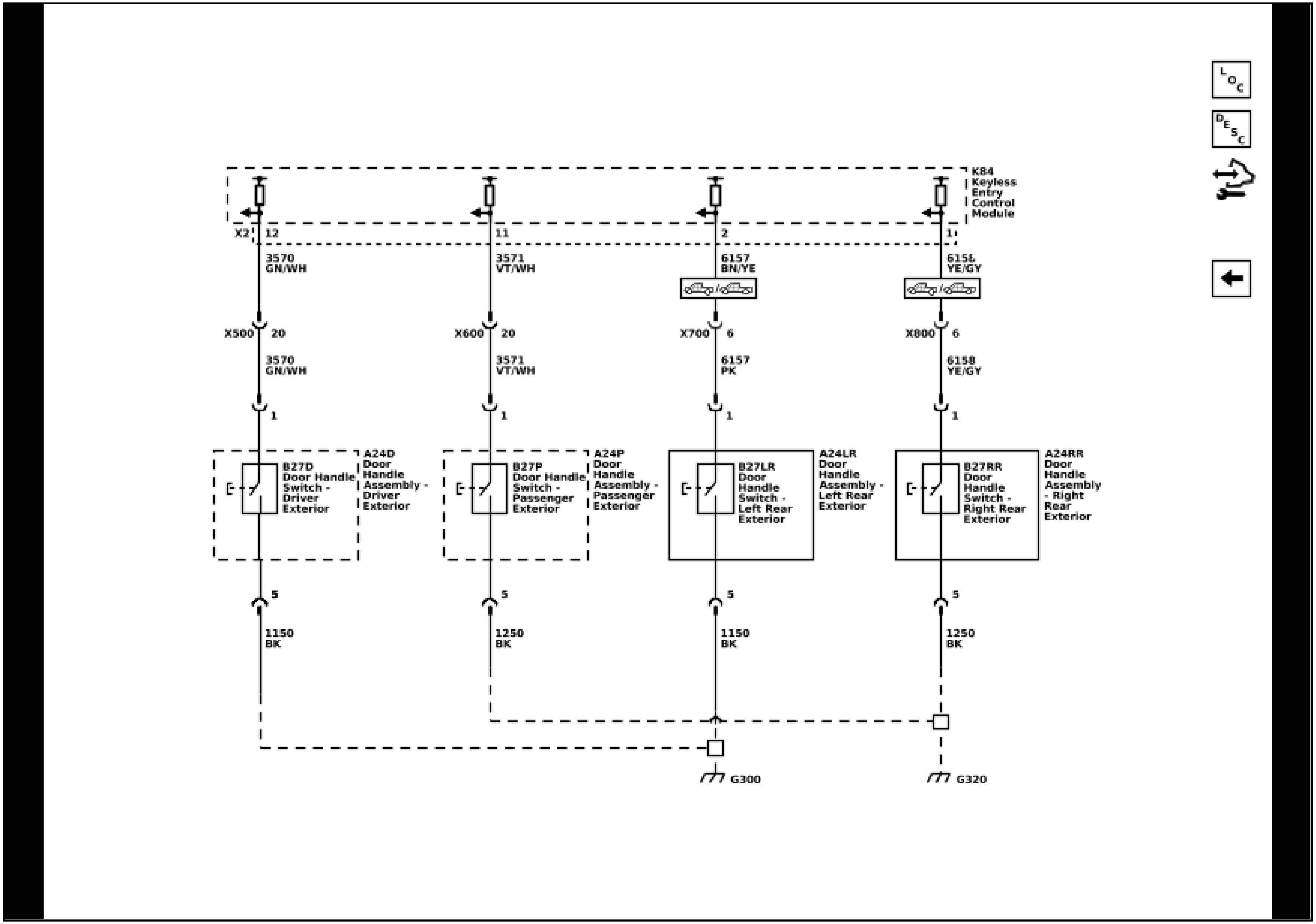
5995396

Door Lock/Indicator Schematics (Actuators)


K9 Body Control Module
1
2
4
X6
5911 GY
295 GY
294 BN/YE
J354
J356
X500
48
49
X600
X700
X800
3
17
8
7
9
A23D Door Latch Assembly - Driver
A23P Door Latch Assembly - Passenger
A23LR Door Latch Assembly - Left Rear
A23RR Door Latch Assembly - Right Rear
M

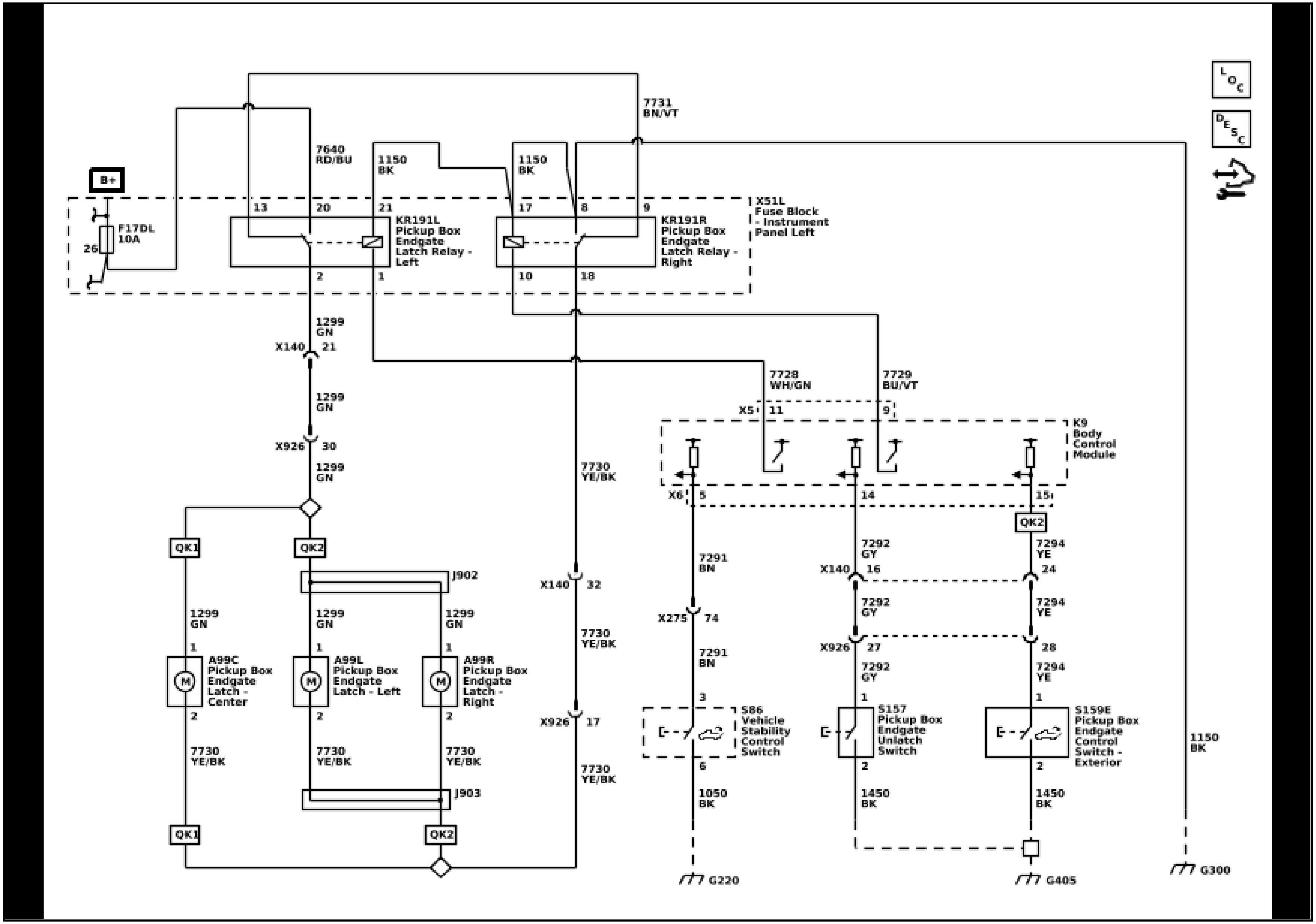
5995397

Door Lock/Indicator Schematics (Handle Switches)


K84
Keyless
Entry
Control
Module
X2
12
11
2
1
3570
GN/WH
3571
VT/WH
6157
BN/YE
6158
YE/GY
X500
20
X600
20
X700
6
X800
6
3570
GN/WH
3571
VT/WH
6157
PK
6158
YE/GY
1
1
1
1
B27D
Door Handle
Switch -
Driver
Exterior
A24D
Door
Handle
Assembly -
Driver
Exterior
B27P
Door Handle
Switch -
Passenger
Exterior
A24P
Door
Handle
Assembly -
Passenger
Exterior
B27LR
Door
Handle
Switch -
Left Rear
Exterior
A24LR
Door
Handle
Assembly -
Left Rear
Exterior
B27RR
Door
Handle
Switch -
Right Rear
Exterior
A24RR
Door
Handle
Assembly
- Right
Rear
Exterior
5
5
5
5
1150
BK
1250
BK
1150
BK
1250
BK
G300
G320

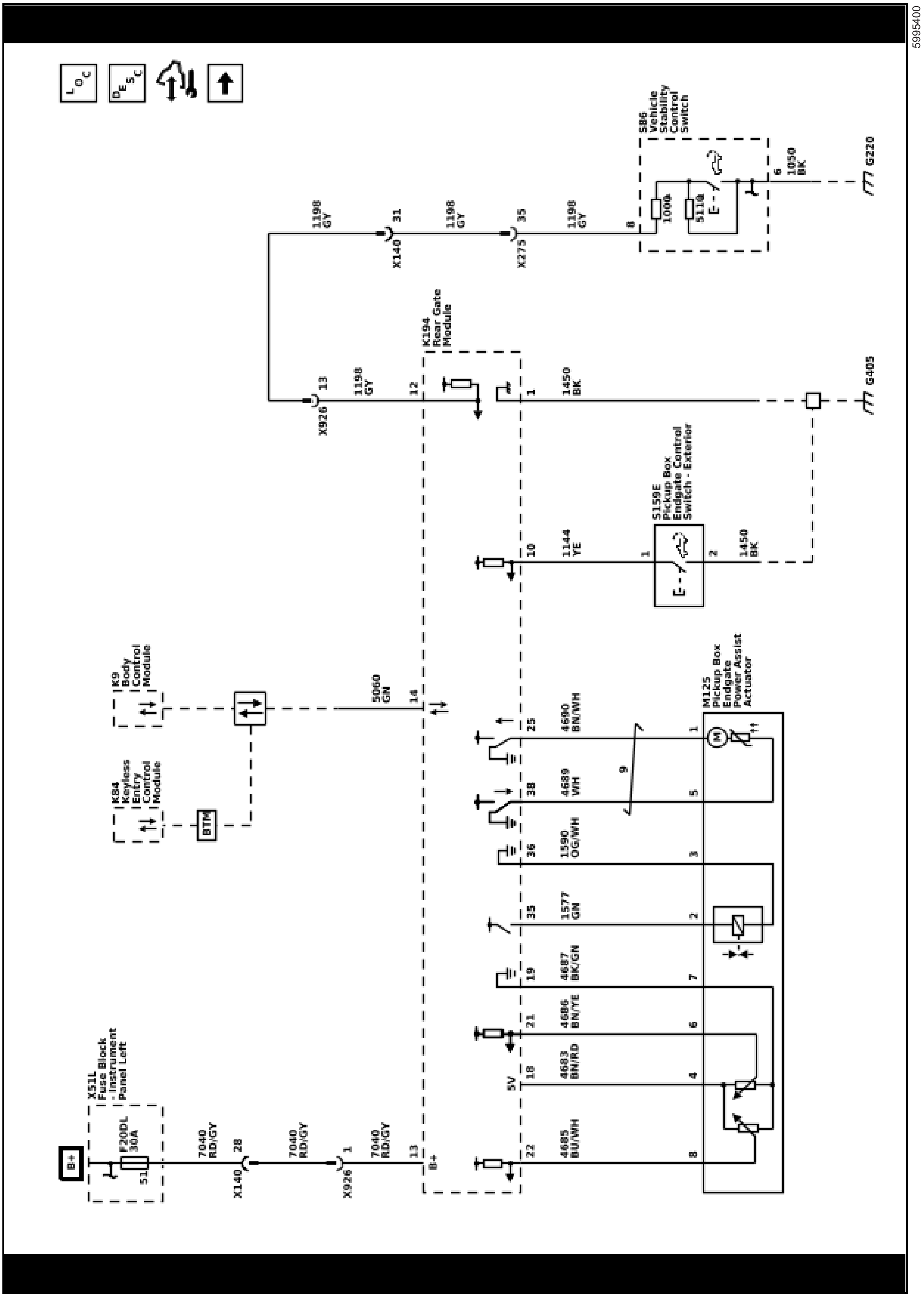
5995398

Release Systems Schematics (Endgate Release (QT5))

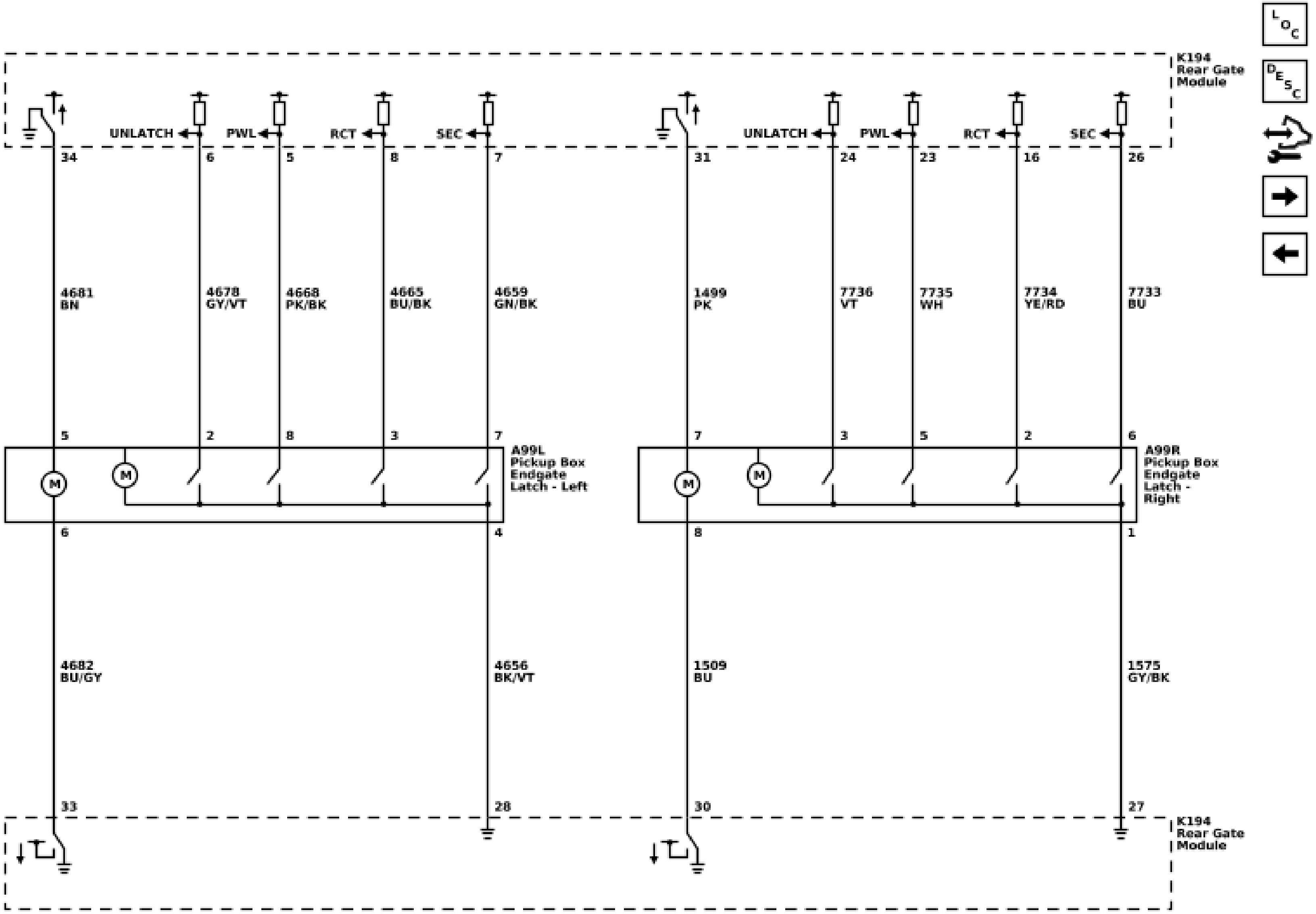

B+
F17DL
10A
26
X51L
Fuse Block
- Instrument
Panel Left
7640
RD/BU
1150
BK
1150
BK
7731
BN/VT
13
20
21
17
8
9
KR191L
Pickup Box
Endgate
Latch Relay -
Left
KR191R
Pickup Box
Endgate
Latch Relay -
Right
2
1
10
18
1299
GN
X140
21
1299
GN
X926
30
1299
GN
7728
WH/GN
7729
BU/VT
X5
11
9
K9
Body
Control
Module
X6
5
14
15
QK2
7730
YE/BK
QK1
QK2
J902
1299
GN
1299
GN
1299
GN
1
1
1
A99C
Pickup Box
Endgate
Latch -
Center
A99L
Pickup Box
Endgate
Latch - Left
A99R
Pickup Box
Endgate
Latch -
Right
M
2
2
2
7730
YE/BK
7730
YE/BK
7730
YE/BK
J903
QK1
QK2
X140
32
7730
YE/BK
X926
17
7730
YE/BK
7291
BN
X275
74
7291
BN
3
S86
Vehicle
Stability
Control
Switch
6
1050
BK
G220
7292
GY
X140
16
7292
GY
X926
27
7292
GY
1
S157
Pickup Box
Endgate
Unlatch
Switch
2
1450
BK
7294
YE
24
7294
YE
28
7294
YE
1
S159E
Pickup Box
Endgate
Control
Switch -
Exterior
2
1450
BK
G405
1150
BK
G300
L O C
D E S C

5995399

Endgate Schematics (Power Endgate Controls (QT6))

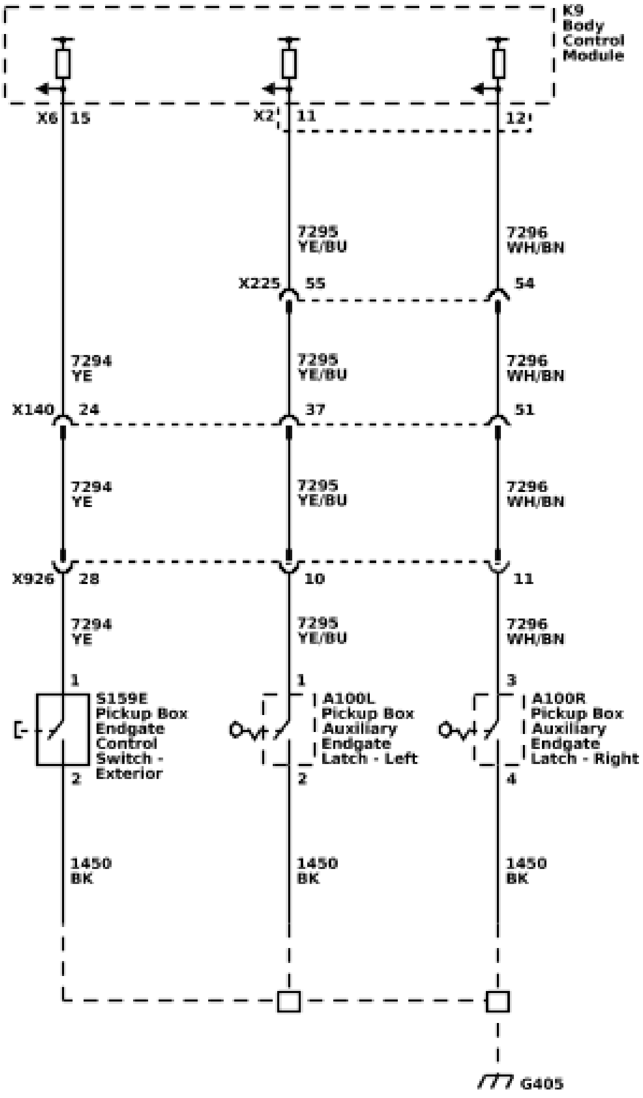

5995400
L O C
D E S C
B+
X51L Fuse Block - Instrument Panel Left
F20DL 30A
51
7040 RD/GY
X140 28
7040 RD/GY
X926 1
7040 RD/GY
13
B+
5V
22 4685 BU/WH
18 4683 BN/RD
21 4686 BN/YE
19 4687 BK/GN
35 1577 GN
36 1590 OG/WH
38 4689 WH
25 4690 BN/WH
9
14 5060 GN
K84 Keyless Entry Control Module
BTM
K9 Body Control Module
M125 Pickup Box Endgate Power Assist Actuator
8
4
6
7
2
3
5
1
M
10 1144 YE
S159E Pickup Box Endgate Control Switch - Exterior
1
2
1450 BK
K194 Rear Gate Module
12 1198 GY
1 1450 BK
G405
X926 13
1198 GY
X140 31
1198 GY
X275 35
1198 GY
8
100Ω
510Ω
S86 Vehicle Stability Control Switch
6 1050 BK
G220

Endgate Schematics (Power Endgate Latches (QT6))


K194
Rear Gate
Module
UNLATCH
PWL
RCT
SEC
34
6
5
8
7
31
24
23
16
26
4681
BN
4678
GY/VT
4668
PK/BK
4665
BU/BK
4659
GN/BK
1499
PK
7736
VT
7735
WH
7734
YE/RD
7733
BU
5
2
8
3
7
7
3
5
2
6
A99L
Pickup Box
Endgate
Latch - Left
A99R
Pickup Box
Endgate
Latch -
Right
M
6
4
8
1
4682
BU/GY
4656
BK/VT
1509
BU
1575
GY/BK
33
28
30
27
K194
Rear Gate
Module

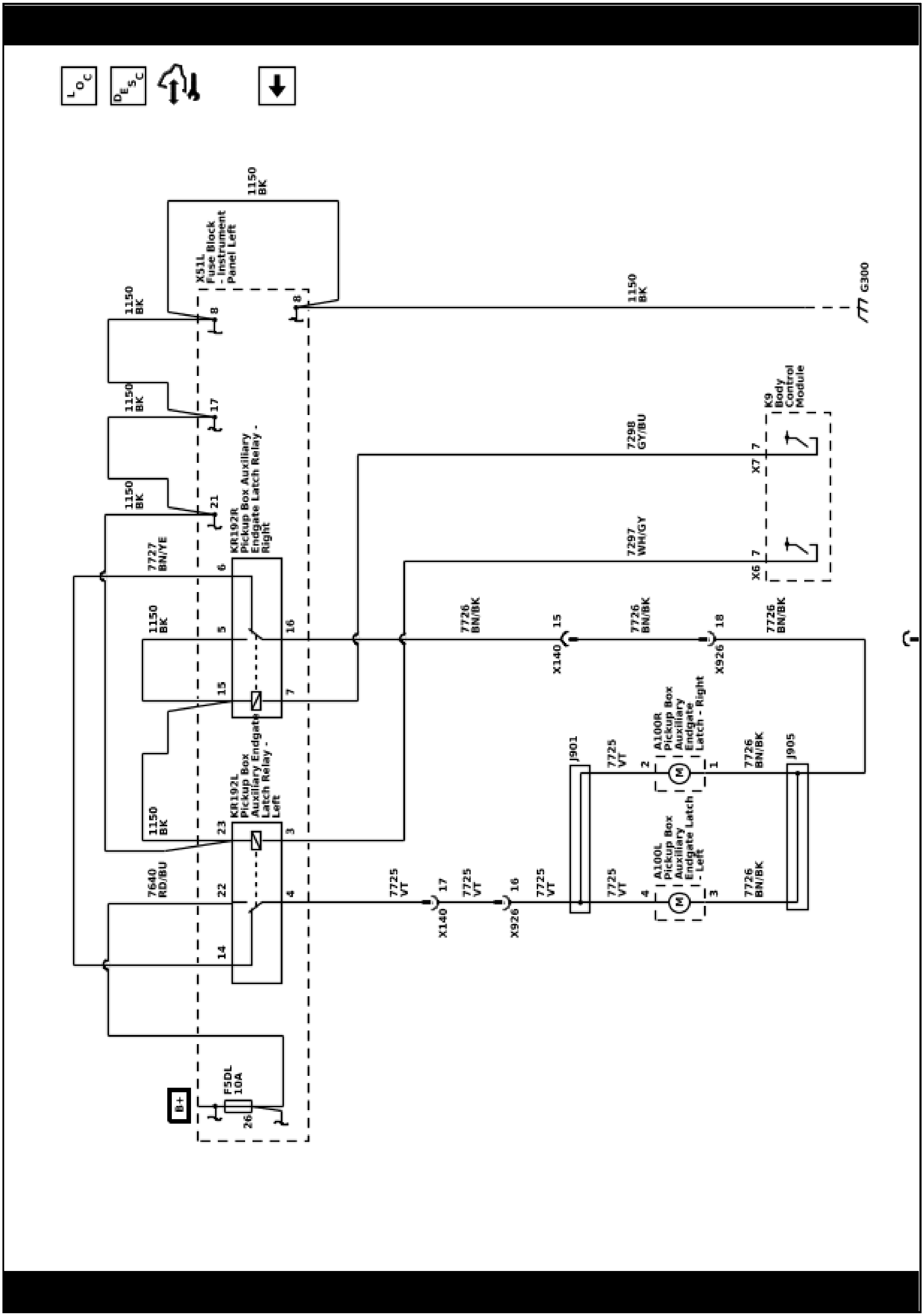
5995401

Endgate Schematics (Auxiliary Endgate Latch Controls and Switches (QK2))

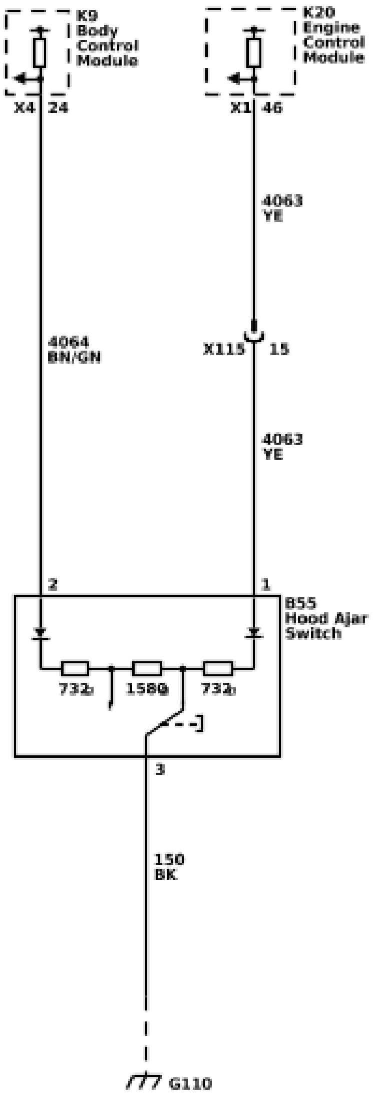

K9
Body
Control
Module
X6 15
X2 11
12
7295
YE/BU
7296
WH/BN
X225 55
54
7294
YE
7295
YE/BU
7296
WH/BN
X140 24
37
51
7294
YE
7295
YE/BU
7296
WH/BN
X926 28
10
11
7294
YE
7295
YE/BU
7296
WH/BN
1
S159E
Pickup Box
Endgate
Control
Switch -
Exterior
2
1
A100L
Pickup Box
Auxiliary
Endgate
Latch - Left
2
3
A100R
Pickup Box
Auxiliary
Endgate
Latch - Right
4
1450
BK
1450
BK
1450
BK
G405

5995402

Endgate Schematics (Auxiliary Endgate Latch Motors (QK2))


5995403
LOC
DESC
B+
F5DL
10A
26
X51L
Fuse Block
- Instrument
Panel Left
8
8
17
21
1150
BK
7640
RD/BU
7727
BN/YE
KR192L
Pickup Box
Auxiliary Endgate
Latch Relay -
Left
KR192R
Pickup Box Auxiliary
Endgate Latch Relay -
Right
14
22
4
23
3
15
7
5
16
6
7725
VT
X140
17
X926
16
J901
J905
A100L
Pickup Box
Auxiliary
Endgate Latch
- Left
M
4
3
A100R
Pickup Box
Auxiliary
Endgate
Latch - Right
2
1
7726
BN/BK
X140
15
X926
18
7297
WH/GY
7298
GY/BU
X6
7
X7
7
K9
Body
Control
Module
G300

Hood Latch Schematics (Hood Ajar Switch)


K9
Body
Control
Module
X4 24
4064
BN/GN
K20
Engine
Control
Module
X1 46
4063
YE
X115 15
4063
YE
2
1
B55
Hood Ajar
Switch
732Ω
1580Ω
732Ω
3
150
BK
G110

5995337

Description and Operation

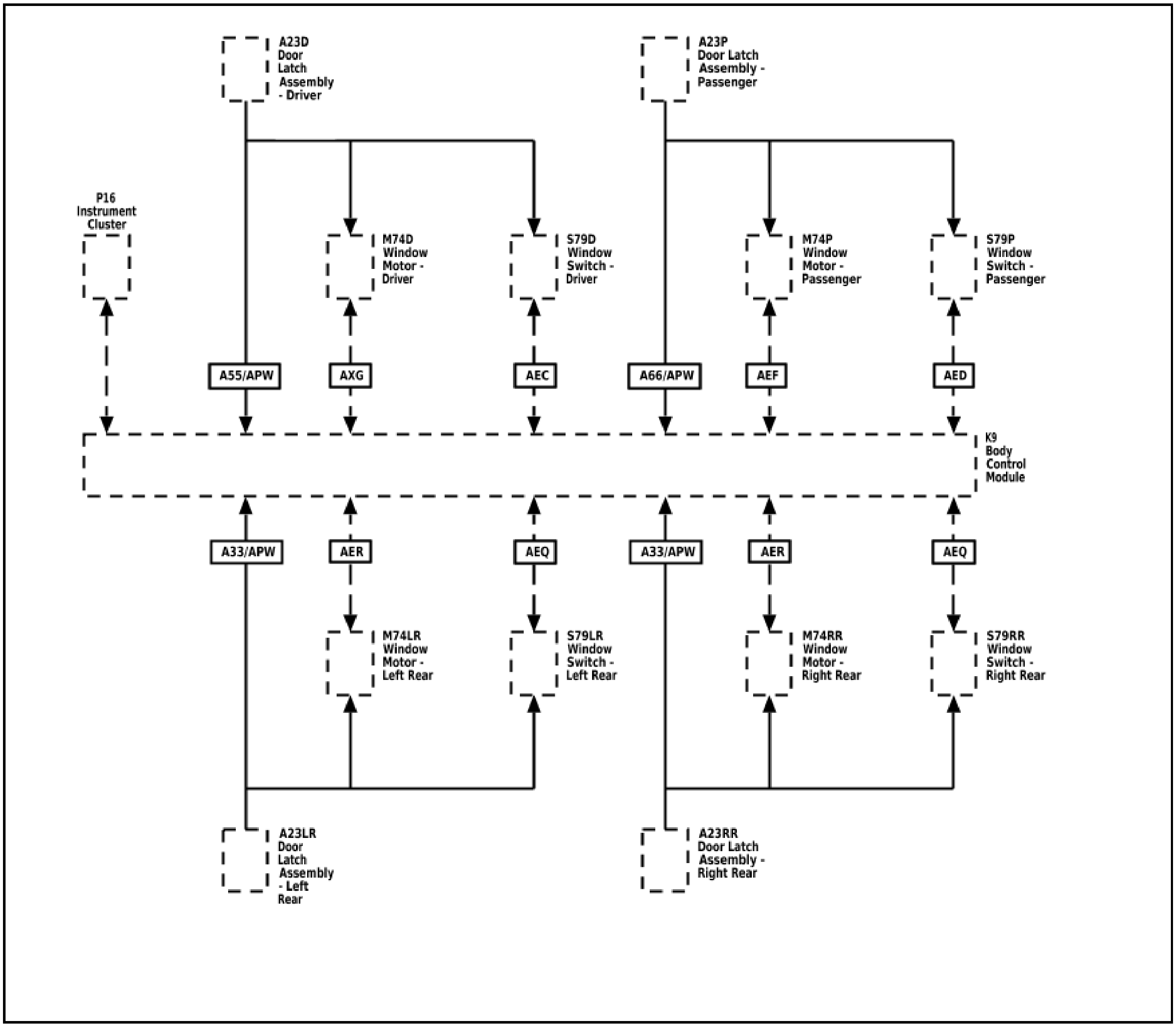
Door Ajar Indicator Description and Operation

Door Ajar Indicator System Components

The door ajar indicator system consists of the following components:

- Body control module
- Instrument cluster
- Driver door latch
- Passenger door latch
- Left rear door latch
- Right rear door latch
- Driver window motor (AXG)
- Driver window switch (AEC)
- Passenger window motor (AEF)
- Passenger window switch (AED)
- Left rear window motor (AER)
- Left rear window switch (AEQ)
- Right rear window motor (AER)
- Right rear window switch (AEQ)

Door Ajar Indicator Block Diagram


A23D Door Latch Assembly - Driver
A23P Door Latch Assembly - Passenger
P16 Instrument Cluster
M74D Window Motor - Driver
S79D Window Switch - Driver
M74P Window Motor - Passenger
S79P Window Switch - Passenger
A55/APW
AXG
AEC
A66/APW
AEF
AED
K9 Body Control Module
A33/APW
AER
AEQ
A33/APW
AER
AEQ
M74LR Window Motor - Left Rear
S79LR Window Switch - Left Rear
M74RR Window Motor - Right Rear
S79RR Window Switch - Right Rear
A23LR Door Latch Assembly - Left Rear
A23RR Door Latch Assembly - Right Rear

3556440

Door Ajar System

Depending upon if the vehicle is equipped with express up/down power windows, express down only power windows, power windows without any express functions or manual crank windows affects how the driver and passenger door ajar signal circuits are configured and monitored.

Driver, Passenger and Rear Door Ajar (AXG, AEF and AER)

The window motors provide a 12V signal to the respective door ajar switch within the door latch to indicate the status of the door. When the door is open, the contract within the ajar switch closes providing a ground part for the signal circuit. The window motor will detect the voltage drop in the ajar signal circuit and will send a serial data message to the body control module. The body control module will then send a message to the instrument cluster which will illuminate the door ajar icon.

Driver, Passenger and Rear Doors Ajar (AEC, AED and AEQ)

The driver, passenger and rear window switches provide a 12V signal to the respective door ajar switch within the door latch to indicate the status of the door. When the door is open, the contract within the ajar switch closes providing a ground part for the signal circuit. The window switch will detect the voltage drop in the ajar signal circuit and will send a serial data message to the body control module. The body control module will then send a message to the instrument cluster which will illuminate the door ajar icon.

Driver, Passenger and Rear Doors Ajar (A55, A66, A33 or Manual Crank Windows)

The body control module provides a 12V signal to each door ajar switch within the door latch to indicate the status of the door. When the door is open, the contract within the ajar switch closes providing a ground part for the signal circuit. The body control module will detect the voltage drop in the ajar signal circuit and will send a message to the instrument cluster which will illuminate the door ajar icon

Endgate Description and Operation (QT6)

System Description

The power endgate system consists of the following components:

- Rear gate module
- Pickup box endgate power assist actuator
- Pickup box endgate position sensor (part of the power assist actuator)
- Interior pickup box endgate control switch (Part of the Instrument panel multifunction switch)
- Exterior pickup box endgate control switch
- Right pickup box endgate latch assembly
- Left pickup box endgate latch assembly
- Keyless entry transmitter
- Remote control door lock receiver

Operation

The power endgate can be commanded to power open by the following methods:

- Pressing the interior pickup box endgate control switch on the center stack
- Pressing the touch pad on the exterior endgate handle (vehicle doors must be unlocked)
- Pressing the endgate button on the RKE transmitter twice and holding until the endgate latches release

The power endgate can be commanded to power close by the following methods:

- Pressing and holding the interior pickup box endgate control switch on the center stack until the endgate is fully closed and latched
- Pressing the touch pad on the exterior endgate handle
- Pressing the endgate button on the RKE transmitter twice and holding until the endgate is fully closed and latched
- Lifting the tailgate at least 10 cm (4 in) above the full close position and holding momentarily

The vehicle must be in Park for any of the power tailgate functions to operate.

The rear gate module will respond to a request by commanding the left and right pickup box endgate latches to release the endgate and activate the pickup box endgate power assist actuator and lower the endgate or to raise and cinch the endgate closed.

Power Latch

The rear gate module continuously monitors power endgate operation and calculates its location and direction of travel from an endgate position sensor (part of the power assist actuator). One input returns the position of the endgate relative to the x-axis and y-axis. The rear gate module then uses these 2 inputs together to calculate its angle relative to the endgate.

The left and right pickup box endgate latches are bi-directional motors and latch or unlatch operation is the result of the direction of the motor rotation. The rear gate module controls the left and right pickup box endgate latches through the control circuits by supplying power and ground in the appropriate polarity. The motor control circuits are monitored by the rear gate module prior to activation for a high or low condition and during motor operation for an insufficient current flow condition. The ratchet, pawl and sector switches are part of the left and right pickup box endgate latches and are used by the rear gate module to determine the state of the latch during the process of latching or unlatching. Each of the latch switch signal circuits are supplied battery voltage and monitored within the rear gate module. The latch switches share a common low reference circuit from the rear gate module and when the switch contacts close the signal circuit goes low and the rear gate module determines the switch to be active. The ratchet, pawl and unlatch switches are inactive when the endgate is closed and will transition to active as the endgate is opened. The sector switch will be inactive when the endgate is closed, during opening of the endgate the sector switch will change to active and back to inactive when the endgate is in the fully open position.

The exterior pickup box endgate control switch signal circuit is supplied battery voltage by the rear gate module. When the switch is pressed the contacts close and the signal circuit goes low, the rear gate module will detect the voltage drop and will command the endgate to release and lower or to power raise the endgate to the closed position.

For vehicles without the optional passive keyless entry, when the exterior pickup box endgate control switch is pressed, the rear gate module will check the status of the vehicle door locks by sending a serial data message to the body control module requesting the door lock status. If the vehicle doors are locked, the rear gate module will ignore the signal from the exterior pickup box endgate control switch. If the vehicle doors are unlocked, the rear gate module will permit the endgate to unlatch and power open when the exterior pickup box endgate control switch is pressed.

For vehicles with the optional passive keyless entry system, the keyless entry control module monitors the proximity of the keyless entry transmitter. If the exterior pickup box endgate control switch is pressed and the keyless entry transmitter is within range, the keyless entry control module will send a serial data message to the rear gate module indicating the presence of the keyless entry transmitter and the rear gate module will permit the endgate to unlatch and power open. If the doors are locked and the keyless entry transmitter is not within range, the rear gate module will ignore the signal from the exterior pickup box endgate control switch.

Manual Endgate Operation

The endgate can be manually closed from the full-open position when the endgate is lifted in a continuous motion. If the endgate motion is stopped between the full-open and half-closed positions, the lift to close feature can engage and power close the endgate. If the touch pad is pressed during power operation, the endgate will stop and allow manual operation. The endgate must be held after stopping, or it will continue to open

Tailgate Release Unavailable Driver Information Center Message

Power Endgate Functions Disabled Without Setting DTCs

The driver information center displays Tailgate Release Unavailable when a thermal inhibit occurs in the latch or drive unit or the position count is out of range.

The power endgate functions will be restored by performing the following actions:

- Closing the endgate which will reset the position counts
- Closing the endgate and removing the F20DL 30A fuse for greater than 5 minutes

Power Endgate Functions Disabled With DTCs Current

The driver information center displays Tailgate Release Unavailable when the rear gate module control module detects a malfunction in the power endgate system and the system is disabled.

Endgate Description and Operation (QT5 Without MultiPro Tailgate)

Endgate Release System Components

- Body control module (BCM)
- Pickup box endgate control switch-interior (Part of the instrument panel multifunction switch)
- Pickup box endgate control switch-exterior
- Pickup box endgate unlatch actuator
- Pickup box endgate unlatch relay

Endgate Release Operation (Without MutiPro Tailgate Option)

Interior Endgate Release Switch

The body control module monitors the voltage level of the endgate unlatch signal circuit so that when the switch is pressed contacts within the switch closes providing a ground path for the endgate unlatch signal circuit, the voltage within the signal circuit is pulled low, the body control module will detect the voltage drop and if the passenger doors are unlocked, will energize the pickup box endgate unlatch relay.

Exterior Endgate Release Switch

The body control module monitors the status of the vehicle doors, if the doors are locked the body control module will ignore the request from the exterior pickup box endgate control switch. If the passenger doors have been commanded to unlock, pressing the exterior pickup box endgate control switch will close contacts within the switch and provide a ground path for the endgate unlatch signal circuit, the body control module will detect the voltage drop and will energize the pickup box endgate unlatch relay.

If the vehicle has been equipped with the passive keyless entry system and the keyless entry transmitter is within 3 feet (1 meter) of the endgate, pressing the exterior pickup box endgate control switch will also function in the same manner but without unlocking the passenger doors. Refer to *Keyless Entry System Description and Operation on page 7-19* for more information on the passive keyless entry system.

Pickup Box Endgate Unlatch actuator

When body control module receives a endgate release command from the exterior pickup box endgate control switch, the body control module applies brief pulse of voltage to the pickup box endgate unlatch relay control circuit, which energizes the coil side of the relay. The switch side of the pickup box endgate unlatch relay then momentarily closes, supplying a brief pulse of battery positive voltage to the pickup box endgate unlatch actuator. The pickup box endgate unlatch actuator is continuously grounded and when it receives the voltage pulse, it will become energized and the latch will activate releasing the endgate so that it may be manually lowered to an open position.

Endgate Description and Operation (QT5 With MultiPro Tailgate)

Endgate Release System Components

- Body control module (BCM)
- Pickup box endgate control switch-interior (Part of the instrument panel multifunction switch)
- Pickup box endgate control switch-exterior
- Left pickup box endgate latch
- Right pickup box endgate latch
- Left pickup box auxiliary endgate latch
- Right pickup box auxiliary endgate latch
- Left pickup box endgate latch relay
- Right pickup box endgate latch relay
- Left pickup box auxiliary endgate latch relay
- Right pickup box auxiliary endgate latch relay

Endgate Release Operation (With MutiPro Tailgate Option)

Interior Endgate Release Switch

The body control module monitors the voltage level of the endgate unlatch signal circuit so that when the switch is pressed contacts within the switch closes providing a ground path for the endgate unlatch signal circuit, the voltage within the signal circuit is pulled low, the body control module will detect the voltage drop and if the passenger doors are unlocked, will energize the left pickup box endgate latch relay and right pickup box endgate latch relay.

Exterior Endgate Release Switch

The body control module monitors the status of the vehicle doors, if the doors are locked the body control module will ignore the request from the exterior pickup box endgate control switch. If the passenger doors have been commanded to unlock, pressing the appropriate exterior pickup box endgate control switch will close contacts within the switch and provide a ground path for the major or minor endgate unlatch signal circuit, the body control module will detect the voltage drop and will energize the appropriate pickup box endgate latch relays.

If the vehicle has been equipped with the passive keyless entry system and the keyless entry transmitter is within 3 feet (1 meter) of the endgate, pressing the exterior pickup box endgate control switch will also function in the same manner but without unlocking the passenger doors. Refer to *Keyless Entry System Description and Operation on page 7-19* for more information on the passive keyless entry system.

Major Pickup Box Endgate

Note: The auxiliary pickup box endgate must be in the latched position before commanding the major pickup box endgate to release. The body control module will disable the major pickup box endgate release function if the auxiliary pickup box endgate is open or ajar.

When body control module receives a major endgate release command from the exterior pickup box endgate control switch, the body control module applies brief pulse of voltage to the left and right pickup box endgate latch relay control circuits, which energizes the coil side of the relays. The switch side of the left and right pickup box endgate latch relay then momentarily closes, supplying a brief pulse of battery positive voltage to the left and right pickup box endgate latches. The left and right pickup box endgate latches will become energized and the latches will activate releasing the major endgate so that it may be manually lowered to an open position.

Minor Pickup Box Endgate

When body control module receives a major endgate release command from the exterior pickup box endgate control switch, the body control module applies brief pulse of voltage to the left and right pickup box auxiliary endgate latch relay control circuits, which energizes the coil side of the relays. The switch side of the left and right pickup box auxiliary endgate latch relay then momentarily closes, supplying a brief pulse of battery positive voltage to the left and right pickup box auxiliary endgate latches. The left and right pickup box auxiliary endgate latches will become energized and the latches will activate releasing the minor endgate so that it may be manually lowered to an open position.

Hood Ajar Indicator Description and Operation

Hood Ajar Switch

The body control module (BCM) applies B+ to the hood ajar signal circuit and monitors the voltage to determine the position of the hood. When the hood is closed, the switch is open and voltage remains high. When the hood is open, the switch is closed and the voltage is pulled low.

The BCM uses the hood ajar switch as a content theft deterrent alarm trigger.

Hood Ajar Indicator/Message

When the hood is ajar, a message is displayed on the DIC or the hood ajar indicator will be illuminated.

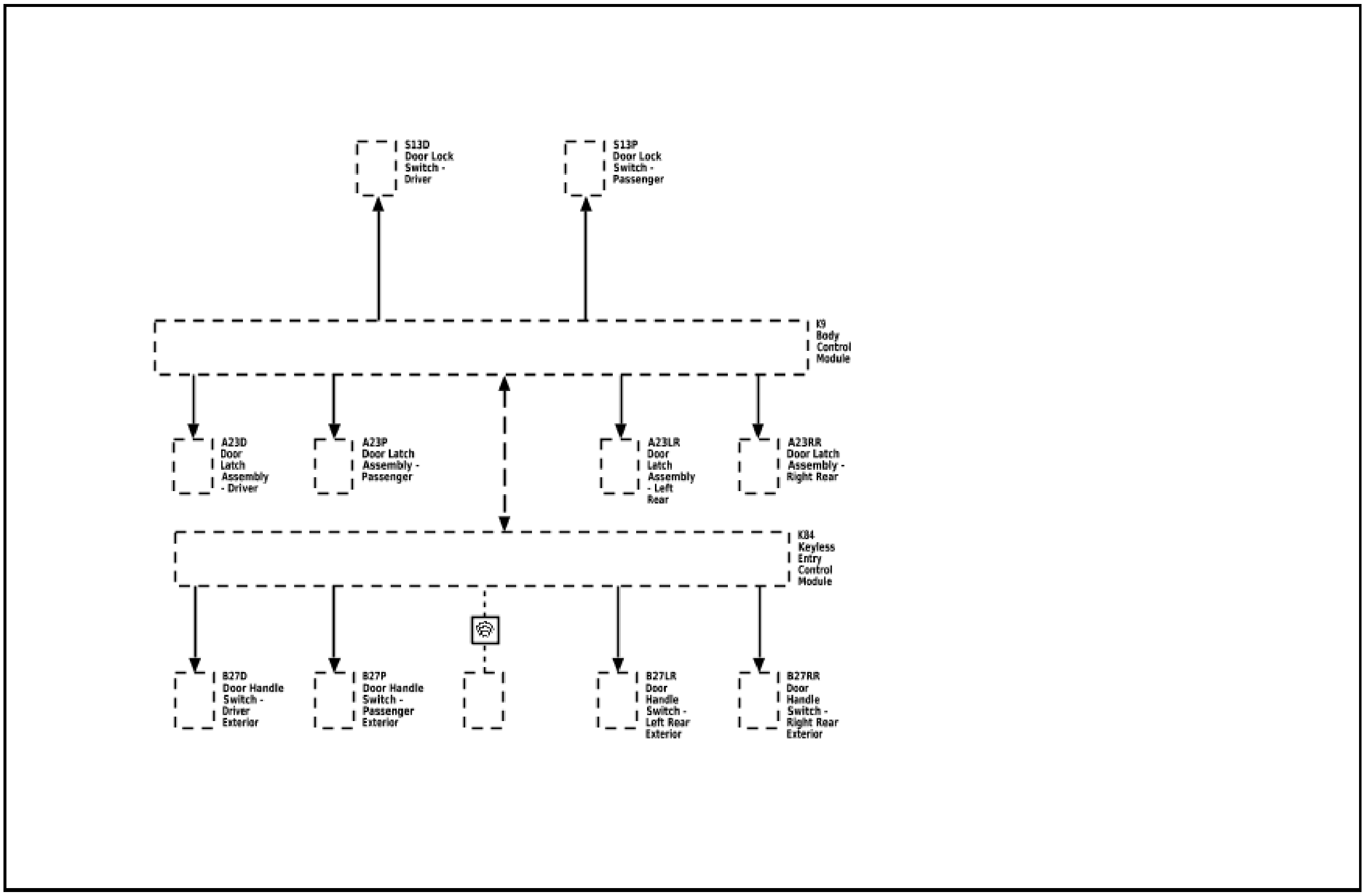
Power Door Locks Description and Operation

Door Lock System Components

The power door lock system consists of the following components:

- Driver door lock switch
- Passenger door lock switch
- Key cylinder switch
- Body control module (BCM)
- Driver door latch
- Passenger door latch
- Left rear door latch
- Right rear door latch
- Exterior door handle switches
- Keyless entry control module

Power Door Locks Block Diagram


S13D
Door Lock
Switch -
Driver
S13P
Door Lock
Switch -
Passenger
K9
Body
Control
Module
A23D
Door
Latch
Assembly
- Driver
A23P
Door Latch
Assembly -
Passenger
A23LR
Door
Latch
Assembly
- Left
Rear
A23RR
Door Latch
Assembly -
Right Rear
K84
Keyless
Entry
Control
Module
B27D
Door Handle
Switch -
Driver
Exterior
B27P
Door Handle
Switch -
Passenger
Exterior
B27LR
Door
Handle
Switch -
Left Rear
Exterior
B27RR
Door
Handle
Switch -
Right Rear
Exterior

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Door Lock and Unlock Operation

When the driver or passenger door lock switch is activated in the lock or unlock position, the BCM will receive a ground signal on either the door lock switch lock or unlock signal circuits.

The BCM, upon receipt of a lock switch lock or unlock signal, will supply battery voltage to the door lock actuator lock or unlock control circuits. Since the opposite side of the lock actuator is connected to ground through the other lock actuator control circuit, the doors will then lock or unlock as commanded.

The following three circuits are used to operate the lock:

- Driver door unlock
- Passenger door unlock
- All door lock

The driver door lock actuator is isolated so it can be unlocked by itself using the keyless entry transmitter.

Key Cylinder Switch

The driver window switch monitors the voltage level of the driver door lock motor status signal circuit. When the key is inserted into the driver door key cylinder and turned to the Lock position, a switch within the driver door latch closes causing the voltage to drop within the driver door lock motor status signal circuit. The driver window switch will detect the drop in voltage and will send a serial data message to the BCM commanding all the doors to Lock.

The driver key cylinder switch is used by the customer for programming the keyless entry transmitters, The driver window/outside rearview mirror switch monitors the voltage level of the key switch unlock signal circuit and when it detects a reprogramming request, it will send a serial data message to the body control module.

Passive Door Lock/Unlock Operation

The exterior door handle switch signal circuits provide inputs to the keyless entry control module when the exterior door handle switches are activated. These inputs allow the keyless entry control module to detect a door lock or a door unlock request. The keyless entry control module provides a 12 V signal to each exterior door handle switch via the door handle switch signal circuits. When a door handle switch is pressed, the switch closes and the voltage signal within the signal circuit is pulled to ground. The keyless entry control module will detect the voltage drop and a low frequency antenna will transmit a challenge to the keyless entry transmitter. If the challenge is met, the keyless entry transmitter will respond and the keyless entry control module will send a serial data message to the body control module to command the door(s) to be locked or unlocked

Section 3

Driver Information and Entertainment

Image Display Cameras 3-3
Schematic and Routing Diagrams 3-3
Image Display Camera Schematics 3-4
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Rearview Camera Full Display Mirror Description and Operation 3-10
Rear Vision Camera Description and Operation (UVC) 3-10
Rear Vision Camera Description and Operation (UVB) 3-10
Rear Vision Camera Description and Operation (Cargo Bed Vision (IOR with UVO)) 3-10
Surround Vision Camera Description and Operation (UV2) 3-11
Surround Vision Camera Description and Operation (Trailer Vision System (UVI/UVN/UVS)) 3-12

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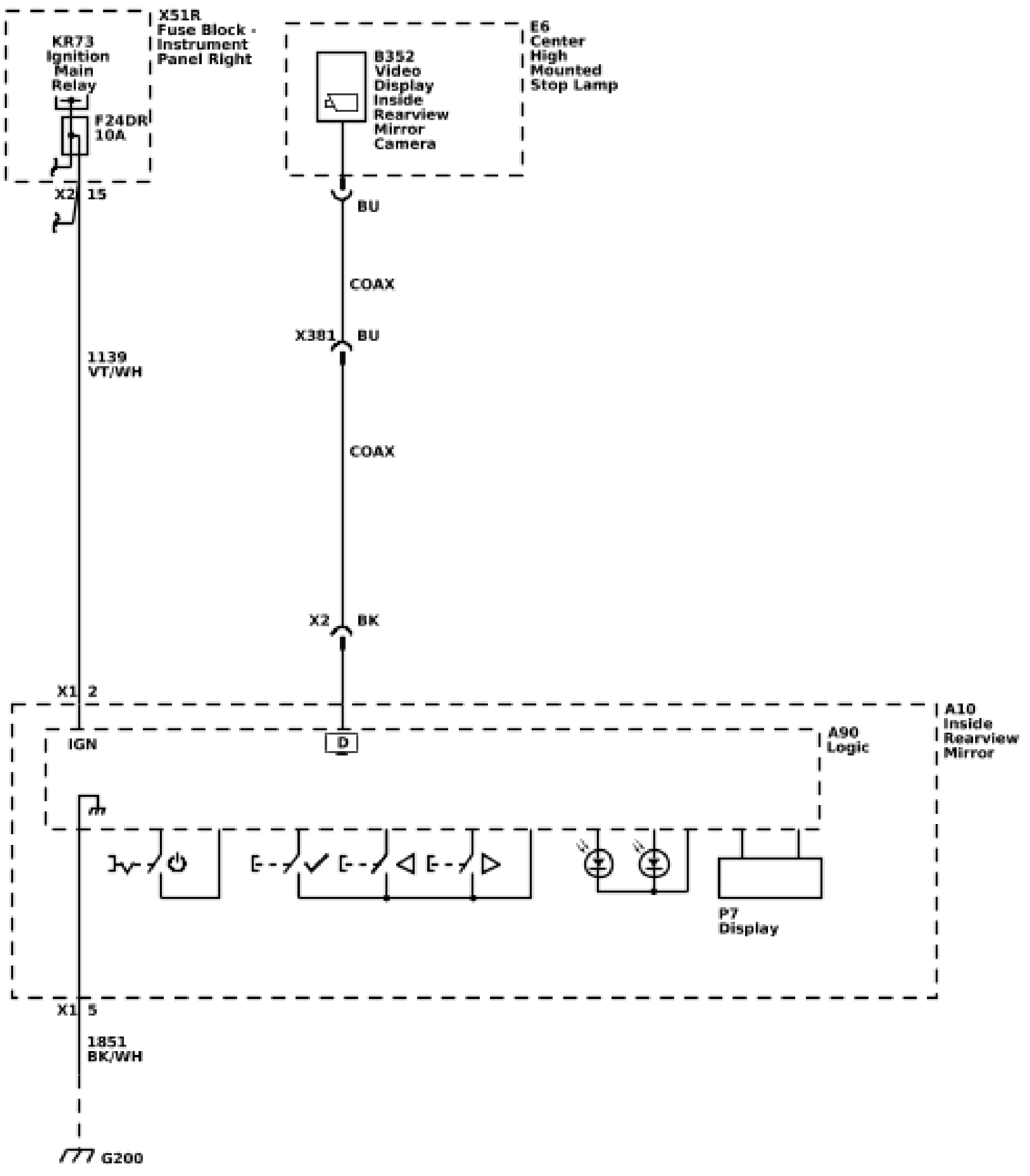
Image Display Cameras

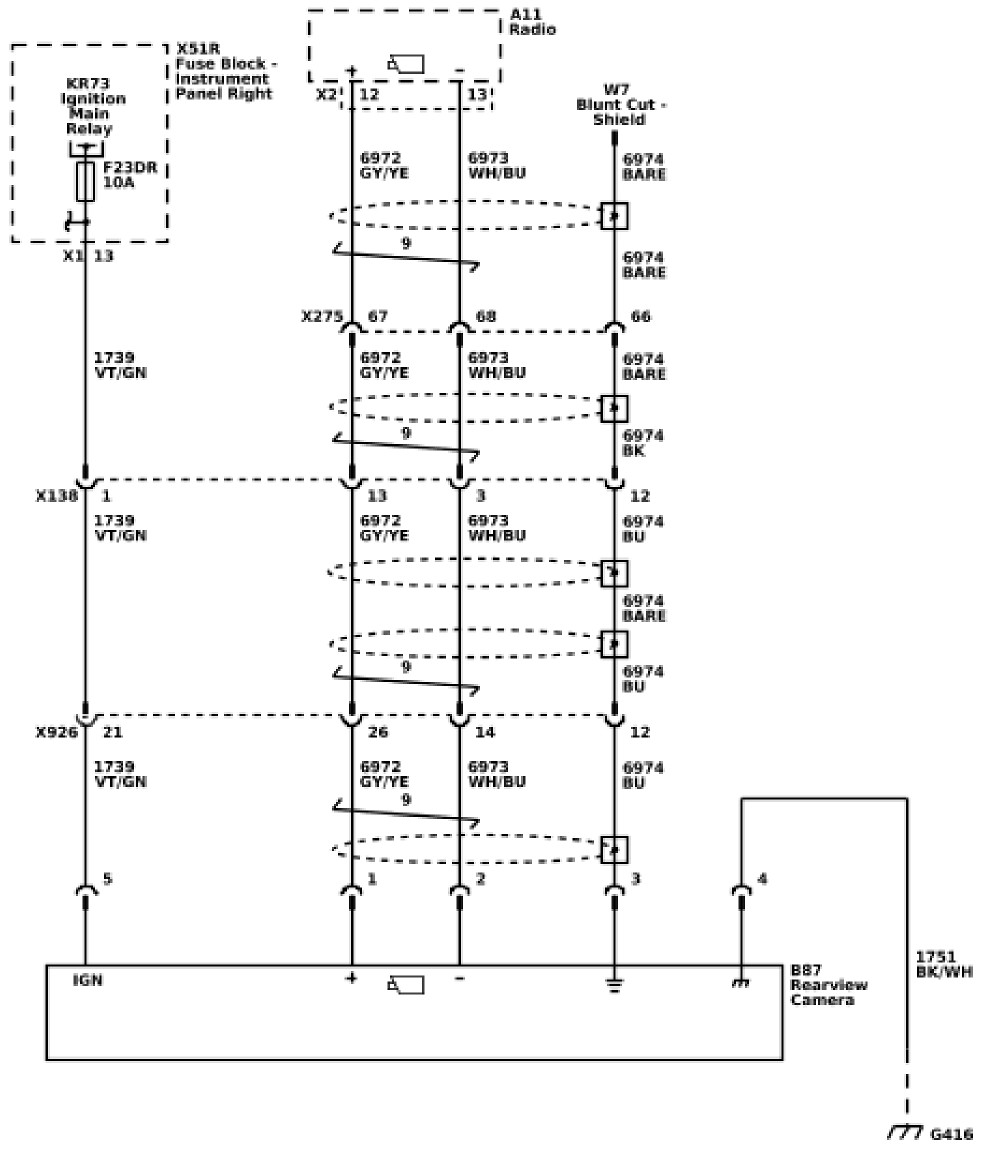
Schematic and Routing Diagrams

Image Display Camera Schematics (Rearview Camera (DRZ))


X51R
Fuse Block - Instrument Panel Right
KR73 Ignition Main Relay
F24DR 10A
X2 15
1139 VT/WH
X1 2
E6 Center High Mounted Stop Lamp
B352 Video Display Inside Rearview Mirror Camera
BU
COAX
X381 BU
COAX
X2 BK
A10 Inside Rearview Mirror
A90 Logic
IGN
D
P7 Display
X1 5
1851 BK/WH
G200

5995433

Image Display Camera Schematics (Rearview Camera (UVC-Chassis Cab))


X51R
Fuse Block - Instrument Panel Right
KR73 Ignition Main Relay
F23DR 10A
X1 13
1739 VT/GN
A11 Radio
X2 12
13
6972 GY/YE
6973 WH/BU
W7 Blunt Cut - Shield
6974 BARE
9
X275 67
68
66
6974 BK
X138 1
13
3
12
6974 BU
X926 21
26
14
5
1
2
3
4
IGN
+
-
B87 Rearview Camera
1751 BK/WH
G416

5995434

Image Display Camera Schematics (Rearview Camera (UVC+Chassis Cab))

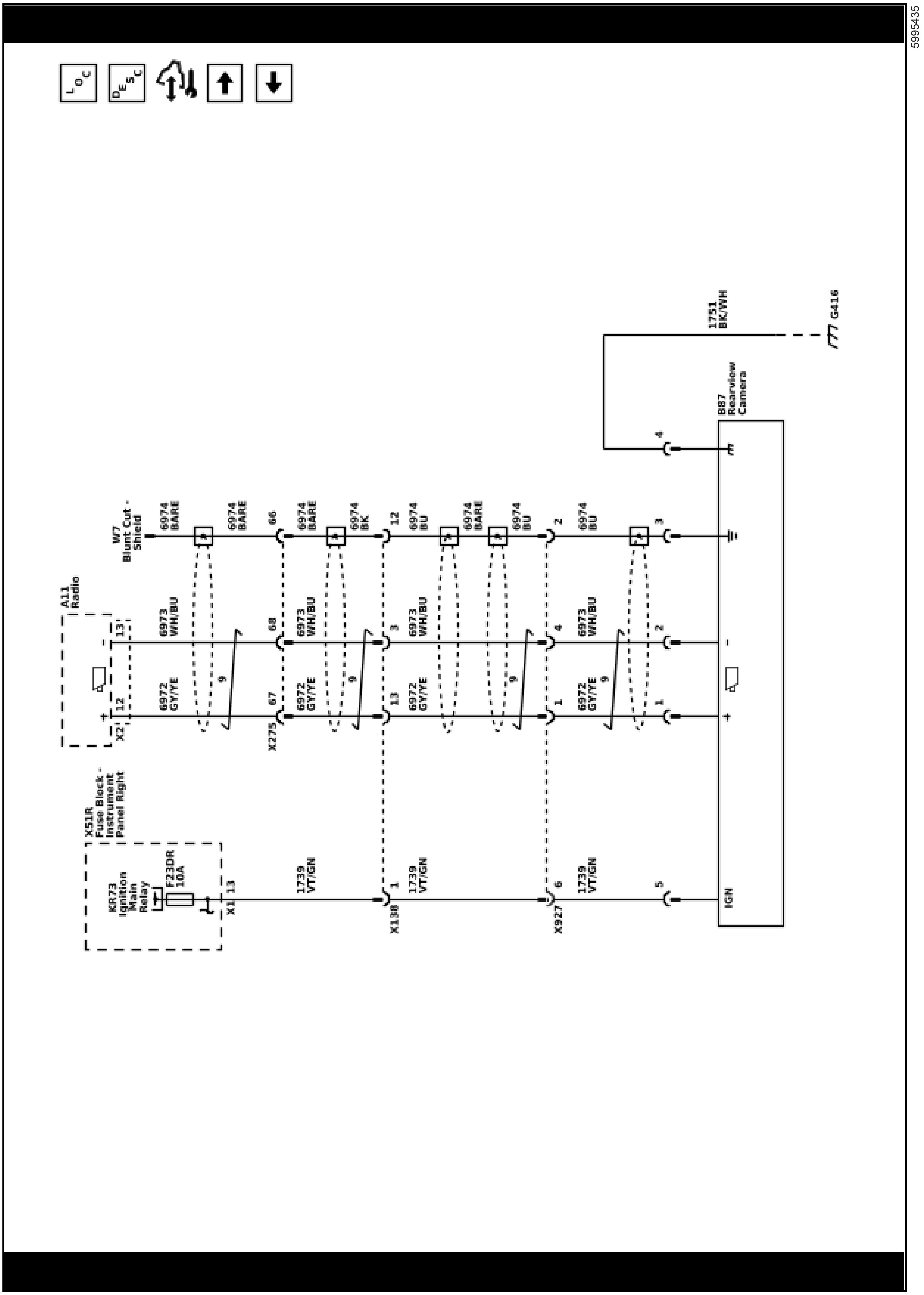
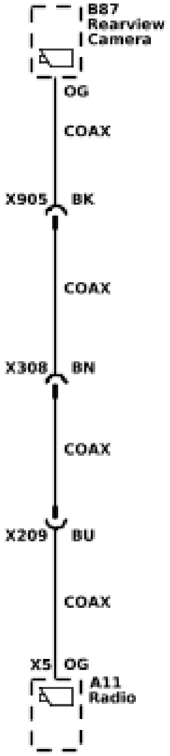

5995435
LOC
DESC
X51R Fuse Block - Instrument Panel Right
KR73 Ignition Main Relay
F23DR 10A
X1 13
1739 VT/GN
X138 1
1739 VT/GN
X927 6
1739 VT/GN
5
IGN
A11 Radio
X2 12
13
6972 GY/YE
6973 WH/BU
W7 Blunt Cut - Shield
6974 BARE
9
6974 BARE
X275 67
68
66
6972 GY/YE
6973 WH/BU
6974 BARE
6974 BK
9
13
3
12
6972 GY/YE
6973 WH/BU
6974 BU
6974 BARE
6974 BU
9
1
4
2
6972 GY/YE
6973 WH/BU
6974 BU
9
1
2
3
4
B87 Rearview Camera
1751 BK/WH
G416

Image Display Camera Schematics (Rearview Camera (UVB))


B87
Rearview
Camera
OG
COAX
X905
BK
COAX
X308
BN
COAX
X209
BU
COAX
X5
OG
A11
Radio

5995436

Image Display Camera Schematics (Surround Vision (UVI/UV2))

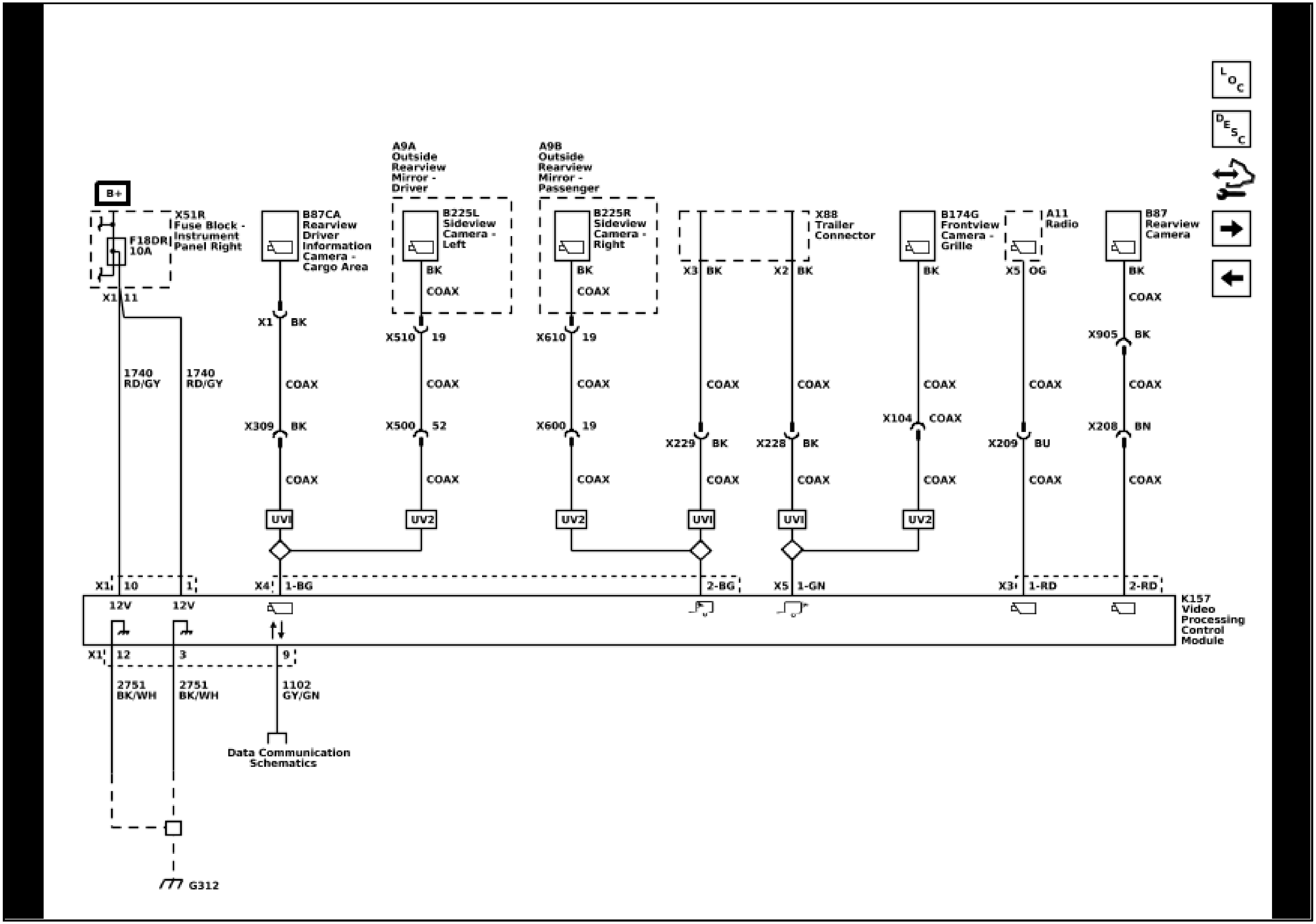

B+
X51R Fuse Block - Instrument Panel Right
F18DR 10A
X1 11
1740 RD/GY
1740 RD/GY
X1 10
1
12V
12V
X1 12
3
2751 BK/WH
2751 BK/WH
G312
B87CA Rearview Driver Information Camera - Cargo Area
X1 BK
COAX
X309 BK
COAX
UVI
X4 1-BG
9
1102 GY/GN
Data Communication Schematics
A9A Outside Rearview Mirror - Driver
B225L Sideview Camera - Left
BK
COAX
X510 19
COAX
X500 52
COAX
UV2
A9B Outside Rearview Mirror - Passenger
B225R Sideview Camera - Right
BK
COAX
X610 19
COAX
X600 19
COAX
UV2
X88 Trailer Connector
X3 BK
COAX
X229 BK
COAX
UVI
2-BG
X2 BK
COAX
X228 BK
COAX
UVI
X5 1-GN
B174G Frontview Camera - Grille
BK
COAX
X104 COAX
COAX
UV2
A11 Radio
X5 OG
COAX
X209 BU
COAX
X3 1-RD
B87 Rearview Camera
BK
COAX
X905 BK
COAX
X208 BN
COAX
2-RD
K157 Video Processing Control Module
LOC
DESC

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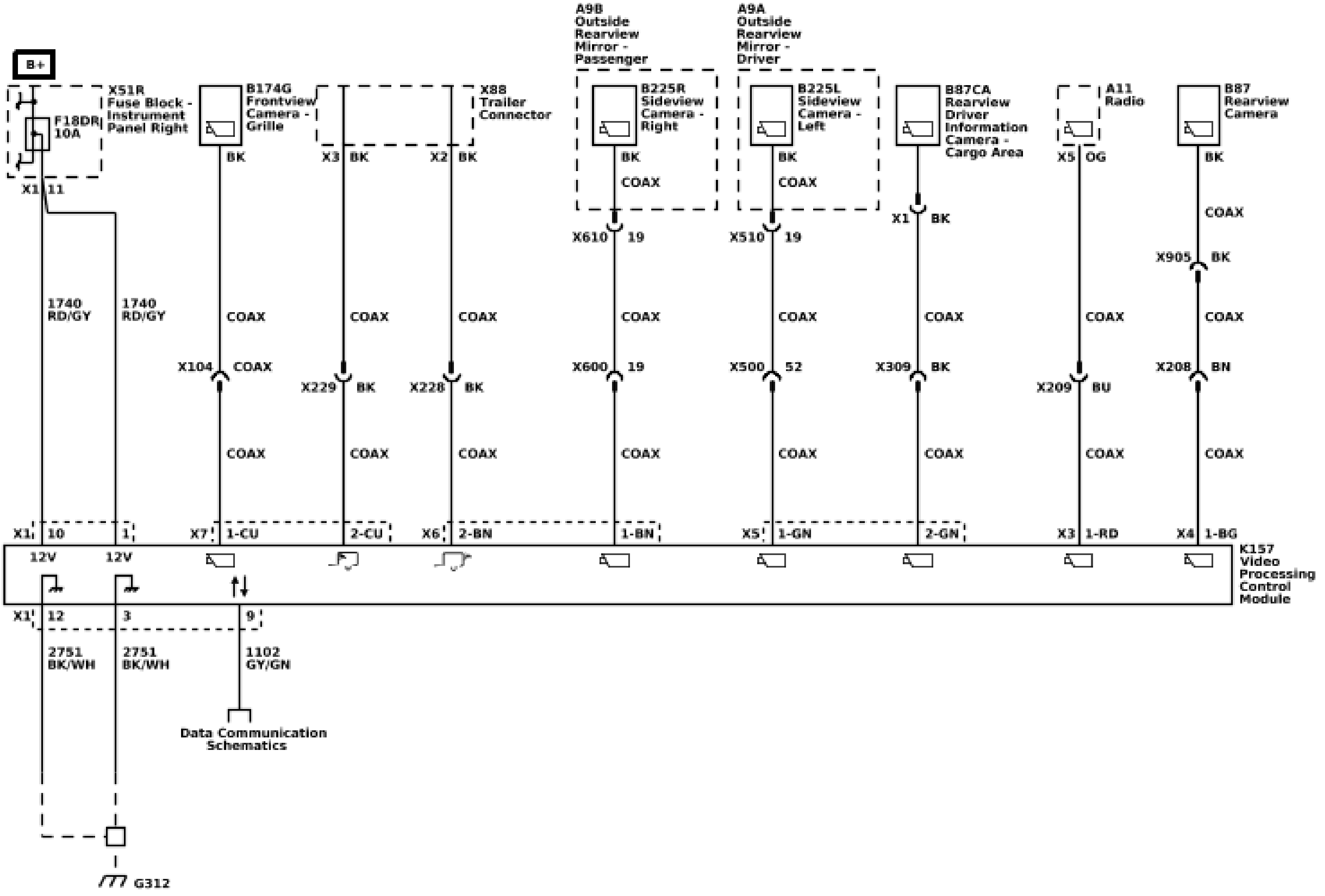
Image Display Camera Schematics (Surround Vision (UVS))


B+
X51R Fuse Block - Instrument Panel Right
F18DR 10A
X1 11
1740 RD/GY
1740 RD/GY
B174G Frontview Camera - Grille
BK
COAX
X104 COAX
COAX
X3 BK
X2 BK
X88 Trailer Connector
X229 BK
X228 BK
A9B Outside Rearview Mirror - Passenger
B225R Sideview Camera - Right
BK
COAX
X610 19
X600 19
A9A Outside Rearview Mirror - Driver
B225L Sideview Camera - Left
X510 19
X500 52
B87CA Rearview Driver Information Camera - Cargo Area
X1 BK
X309 BK
A11 Radio
X5 OG
X209 BU
B87 Rearview Camera
X905 BK
X208 BN
X1 10
1
X7 1-CU
2-CU
X6 2-BN
1-BN
X5 1-GN
2-GN
X3 1-RD
X4 1-BG
12V
12V
K157 Video Processing Control Module
X1 12
3
9
2751 BK/WH
2751 BK/WH
1102 GY/GN
Data Communication Schematics
G312

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Description and Operation

Rearview Camera Full Display Mirror Description and Operation

If equipped, full display mirror provides a wider field of view than normally seen from the inside rearview mirror to assist when driving and changing lanes. When the tab under the inside rearview mirror is pulled rearward, a view of the area behind the vehicle displays on the mirror. The inside rearview camera full display mirror is connected to the outside rearview camera via a shielded coaxial cable.

When the tab under the inside rearview mirror is pulled rearward, a view of the area behind the vehicle displays on the mirror.

Adjust the rearview mirror for a clear view of the area behind the vehicle before turning on full display mirror. Use the three buttons on the bottom of the mirror to adjust the brightness, zoom, and tilt of the display. Make sure the light sensor is not covered when adjusting the brightness.

The inside rearview camera full display mirror may not work properly or display a clear image if:.

- It is dark.
- The sun or the beam of headlamps are shining directly into the camera lens.
- Ice, snow, mud, or anything else builds up on the camera lens. Clean the lens, rinse it with water, and wipe it with a soft cloth.

When the mirror detects that the camera is not sending a valid video signal, it “blue screens” with a “no video” decal for 3 seconds, then reverts back to the mirror.

Rear Vision Camera Description and Operation (UVC)

Rear Vision Camera System Operation

The rear vision camera system consists of a video camera located at the rear of the vehicle and the Rado.

When the transmission is placed into REVERSE, a signal indicates to the Radio that the vehicle is in reverse and image display is requested. The rear vision camera receives ignition voltage and a constant ground to power the camera. Video signal + and video signal – circuits carry the video image from the rear vision camera to the radio. Additionally, the video signal circuits are shielded to prevent any interference which may lead to a loss of video signal resolution and a degraded video image. The shield is provided a ground path by the rear vision camera.

The following conditions may cause a degraded rear vision camera image:

- Ice, snow, or mud has built up on the rear vision camera
- Dark conditions
- Extreme light conditions, such as glare from the sun or the headlights of another vehicle
- Damage to the rear of the vehicle
- Extreme high temperatures or extreme temperature changes

If a malfunction is detected in the system, Service Rear Vision Camera may be displayed on the Infotainment screen as an indicator to the customer that a problem exists that requires service.

Rear Vision Camera Description and Operation (UVB)

Rear Vision Camera System Operation

The rear vision camera system consists of a video camera located at the rear of the vehicle and the Rado.

When the transmission is placed into REVERSE, a signal is sent to the Radio indicating that camera operation is requested. The rearview camera sends video information to the radio through a coax cable. The coax cable also provides power from the Radio to the rearview camera.

The following conditions may cause a degraded rear vision camera image:

- Ice, snow, or mud has built up on the rear vision camera
- Dark conditions
- Extreme light conditions, such as glare from the sun or the headlights of another vehicle
- Damage to the rear of the vehicle
- Extreme high temperatures or extreme temperature changes

If a malfunction is detected in the system, Service Rear Vision Camera may be displayed on the Info Display Module as an indicator to the customer that a problem exists that requires service.

Rear Vision Camera Description and Operation (Cargo Bed Vision (IOR with UVO))

Rear Vision Camera System Operation

The rear vision camera system consists of a video camera located at the rear of the vehicle and the A10 Inside Rearview Mirror

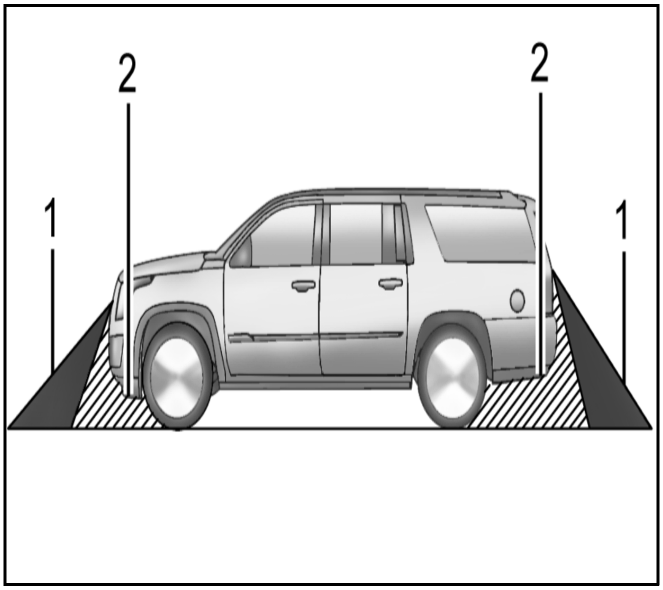
The cargo bed vision camera receives ignition voltage and a constant ground to power the camera. Video signal + and video signal – circuits carry the video image from the rear vision camera to the A10 Inside Rearview Mirror . Additionally, the video signal circuits are shielded to prevent any interference which may lead to a loss of video signal resolution and a degraded video image. The shield is provided a ground path by the rear vision camera.

The following conditions may cause a degraded cargo bed vision camera image:

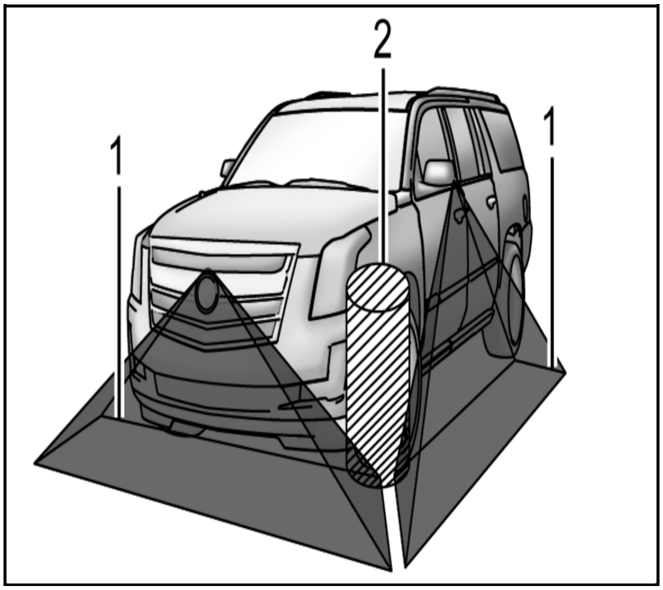
- Ice, snow, or mud has built up on the rear vision camera
- Dark conditions
- Extreme light conditions, such as glare from the sun or the headlights of another vehicle
- Damage to the rear of the vehicle
- Extreme high temperatures or extreme temperature changes

Surround Vision Camera Description and Operation (UV2)

Warning: The Surround Vision cameras have blind spots and will not display all objects near the corners of the vehicle. Folding outside mirrors that are out of position may not display surround view correctly. Always check around the vehicle when parking or backing.



1. View Displayed by the Surround Vision Camera
2. Area Not Shown



1. View Displayed by the Surround Vision Camera
2. Area Not Shown

The surround vision camera system consists of the following components:

- B87 Rearview Camera
- B174G Frontview Camera – Grille
- K157 Video Processing Control Module
- A11 Radio **OR** K74 Human Machine Interface Module
- B225L Sideview Camera – Left
- B225R Sideview Camera – Right
- X20 Memory Card Receptacle (with XVR)

When the vehicle is traveling at speeds slower than 6 mph (10kph) the video processing control module will power up the cameras and send a video signal to the radio or human machine interface module.

The following conditions may cause a degraded surround vision camera image:

- Ice, snow, or mud has built up on the rear vision camera
- Dark conditions
- Extreme light conditions, such as glare from the sun or the headlights of another vehicle
- Damage to the rear of the vehicle
- Extreme high temperatures or extreme temperature changes

Surround Vision displays an overhead view of the area surrounding the vehicle, along with the front or rear camera views in the center stack. The front camera is in the grille or near the front emblem, the side cameras are on the bottom of the outside rearview mirrors, and the rear vision camera is above the license plate.

Note: Images from the Sideview Cameras are only displayed when both front doors are properly closed.

Features of the Surround Vision System

- Rear camera (B87 Rearview Camera) view alongside overhead view is displayed in reverse
- Front camera (B174G Frontview Camera – Grille) view alongside overhead view is displayed after shifting out of reverse to Neutral or Drive
- Will display front view when front park assist object is within trigger range calibration value (30 cm (12 in) in a forward gear
- Image is removed from display when vehicle speed exceeds speed calibration (10kph/6 mph) or button press / screen touch

System Operation

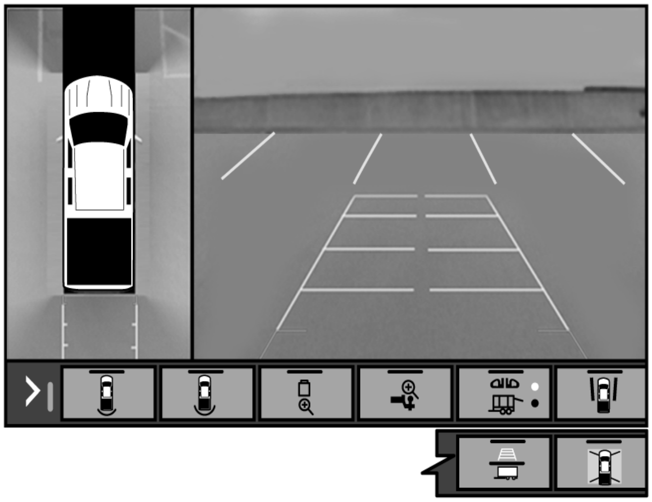
The video processing control module is connected to each camera via a shielded coaxial cable. The coaxial cable provides power for the camera and also carries the video image from the cameras to the video processing control module for processing. The video processing control module will then send the processed image output to infotainment system via another coaxial cable.

The video processing module receives various vehicle information (such as steering wheel angle, object detection, etc) from other sources such as parking assist modules and the Body Control Module via serial data. This information is used to produce the enhanced surround vision system images that include a warning triangle that may display if an object is detected nearby. This triangle changes from amber to red and increases in size as the object gets closer to the vehicle. Also, dynamic guidelines are displayed in Reverse to show the projected path of the vehicle based on steering wheel angle. Due to this use of vehicle information, any faults or DTCs in these related systems can prohibit proper surround vision operation.

If equipped, the video processing control module system may have a memory card receptacle (with XVR) located in the trunk. The memory card receptacle interfaces with the video processing control module via a USB cable. The memory card receptacle also receives fused battery voltage and ground from the video processing control module. The video processing control module uses the memory card as a mass storage device, similar to a USB storage device.

Surround Vision Camera Description and Operation (Trailer Vision System (UVI/UVN/UVS))

Warning: The Surround Vision cameras have blind spots and will not display all objects near the corners of the vehicle. Folding outside mirrors that are out of position may not display surround view correctly. Always check around the vehicle when parking or backing.



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The Surround Vision- Trailer Vision camera systems consists of the following components:

UVI (4 channel)

- K157 Video Processing Control Module
- A11 Radio
- P17 Info Display Module
- B87 Rearview Camera
- B225L Sideview Camera – Left
- B225R Sideview Camera – Right
- Trailer Camera (if customer installed)

UVI with UVN (4 channel)

- K157 Video Processing Control Module
- A11 Radio
- P17 Info Display Module
- B87 Rearview Camera
- B87CA Rearview Driver Information Camera-Cargo Area
- Trailer Rearview Camera (if customer installed)
- Trailer Interior Camera (if customer installed)

UVS with UVN (8 channel)

- K157 Video Processing Control Module
- A11 Radio
- P17 Info Display Module
- B87 Rearview Camera
- B225L Sideview Camera – Left
- B225R Sideview Camera – Right
- B174G Frontview Camera – Grille
- B87CA Rearview Driver Information Camera-Cargo Area
- Trailer Rearview Camera (if customer installed)
- Trailer Interior Camera (if customer installed)

Features of the Surround Vision– Trailer Vision System

- Rear camera (B87 Rearview Camera) alongside overhead view is displayed in reverse
- Trailer Rearview Camera (if equipped) and Trailer Interior Camera (if equipped) view are displayed when selected via the Trailering application on the Infotainment screen. These cameras can also be configured to create a Transparent Trailer View when configured accordingly.
- Cargo Bed Camera view (if equipped) is displayed when selected via the Trailering application on the Infotainment screen.
- Image is removed from display when vehicle speed exceeds speed calibration (10kph/6 mph) or button press / screen touch
- Hitch View (when selected) displays a rear view camera image with a single guideline, which aids in aligning the truck to the trailer. If the driver shifts into PARK while in Hitch View, the parking brake is engaged to keep the vehicle from rocking when the driver gets out of the vehicle to hitch the trailer.
- Surround Vision displays an overhead view of the area surrounding the vehicle, along with the rear camera views in the center stack. The side cameras are on the bottom of the outside rearview mirrors, and the rear vision camera is above the license plate, and a rearview trailer camera can be mounted on the rear of a trailer.

  Note: Images from the Sideview Cameras are only displayed when both front doors are properly closed.

System Operation

The video processing control module is connected to each camera via a shielded coaxial cable. The coaxial cable provides power for the camera and also carries the video image from the cameras to the video processing control module for processing. The video processing control module will then send the processed image output to infotainment system via another coaxial cable.

The video processing module receives various vehicle information (such as steering wheel angle, object detection, etc) from other sources such as parking assist modules and the Body Control Module via serial data. This information is used to produce the enhanced surround vision system images that include a warning triangle that may display if an object is detected nearby. This triangle changes from amber to red and increases in size as the object gets closer to the vehicle. Also, dynamic guidelines are displayed in Reverse to show the projected path of the vehicle based on steering wheel angle. Due to this use of vehicle information, any faults or DTCs in these related systems can prohibit proper surround vision operation.

When the vehicle is traveling at speeds slower than 6 mph (10kph) the video processing control module will power up the cameras and send a video signal to the radio.

The following conditions may cause a degraded surround vision camera image:

- Ice, snow, or mud has built up on any camera
- Dark conditions
- Extreme light conditions, such as glare from the sun or the headlights of another vehicle
- Body damage to the vehicle
- Extreme high temperatures or extreme temperature changes

BLANK

Section 4

Engine/Propulsion

12 V Starting and Charging 4-3
  Schematic and Routing Diagrams 4-3
    Starting and Charging Schematics 4-4
    Auxiliary Battery Schematics 4-11
  Description and Operation 4-12
    Battery Description and Operation 4-12
    Charging System Description and Operation ... 4-12
    Electrical Power Management Description and Operation 4-16
    Load Shed System Description and Operation 4-18
    Starting System Description and Operation 4-19

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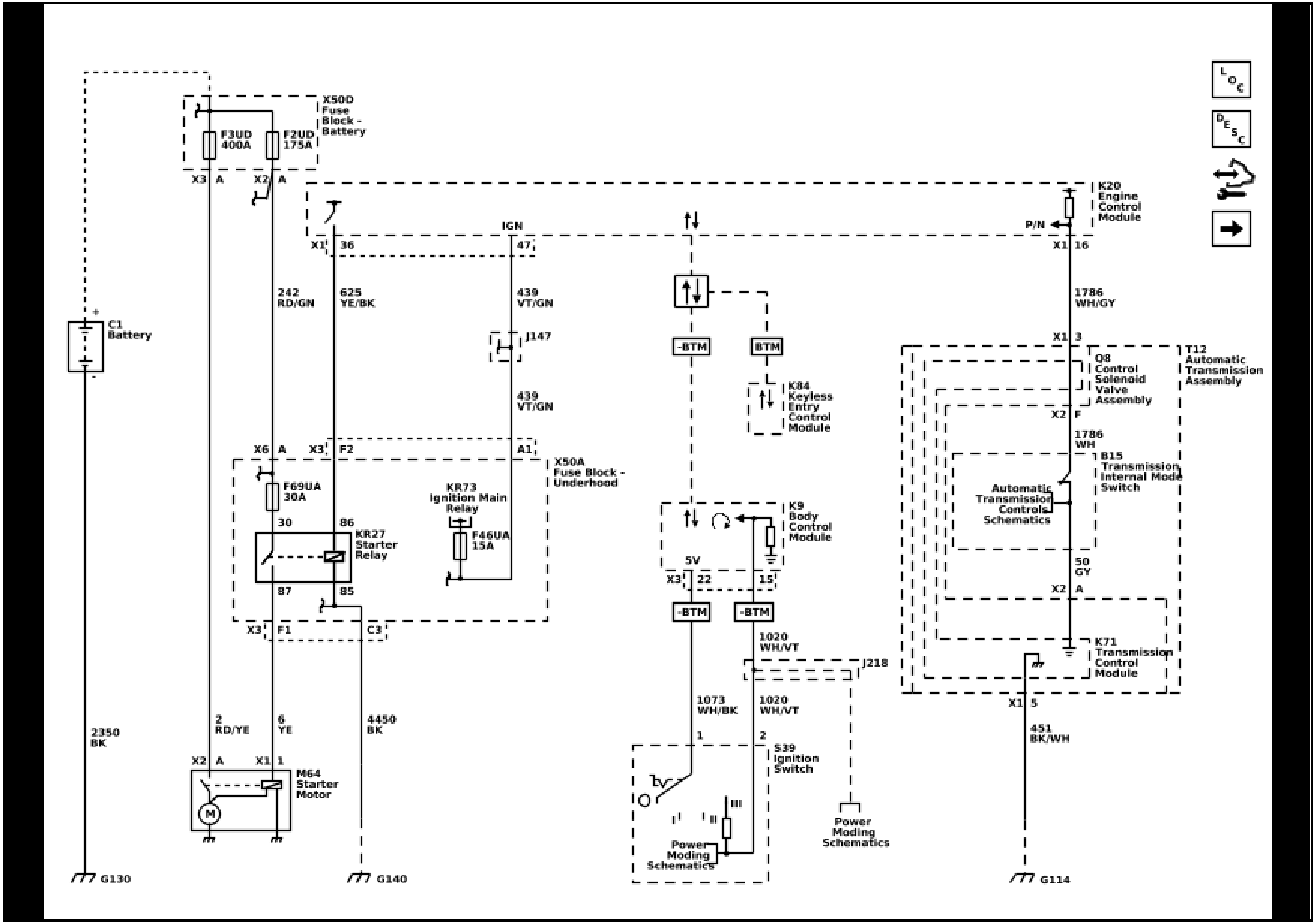
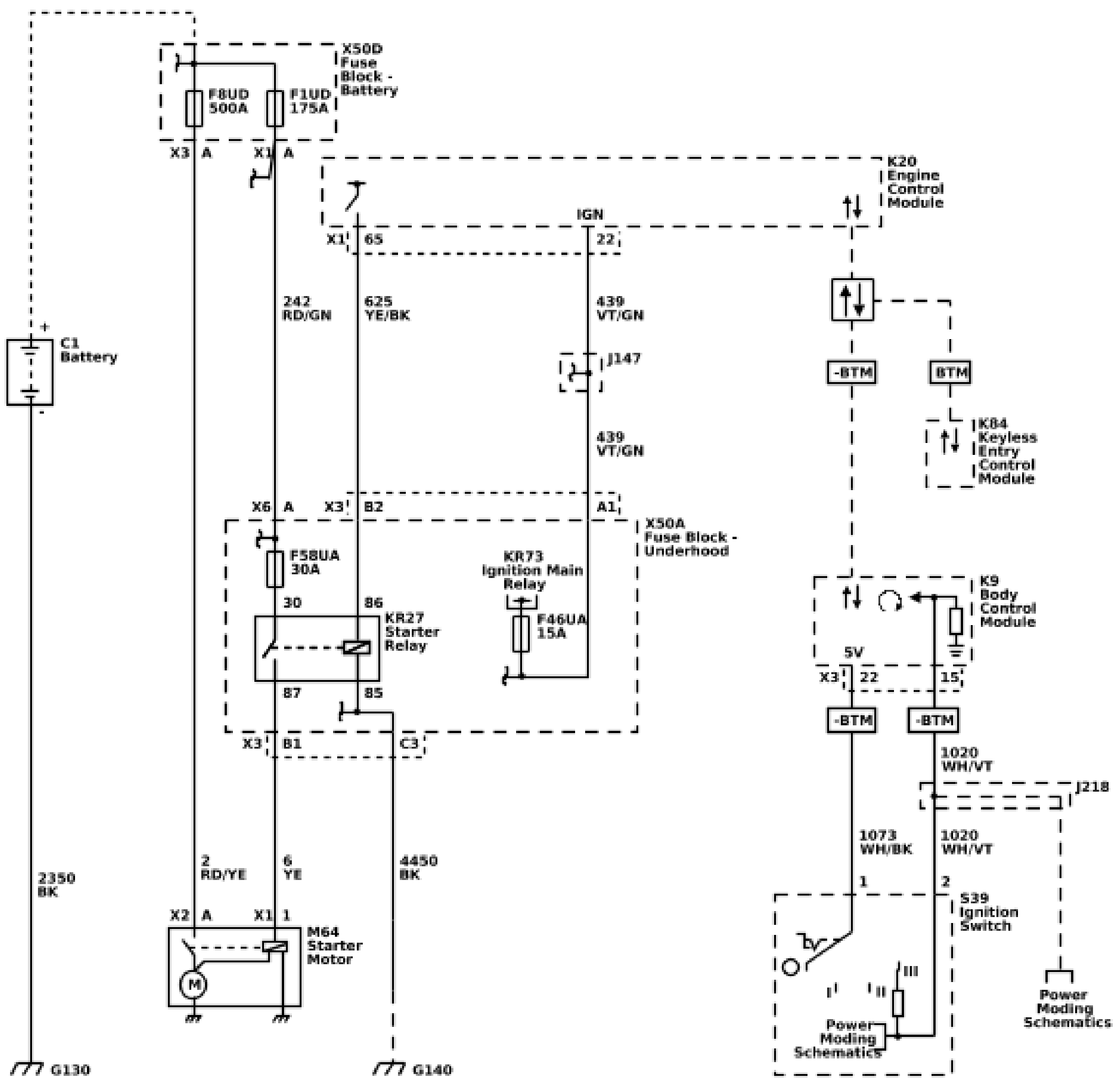
12 V Starting and Charging

Schematic and Routing Diagrams

Starting and Charging Schematics (Starting (MYD))

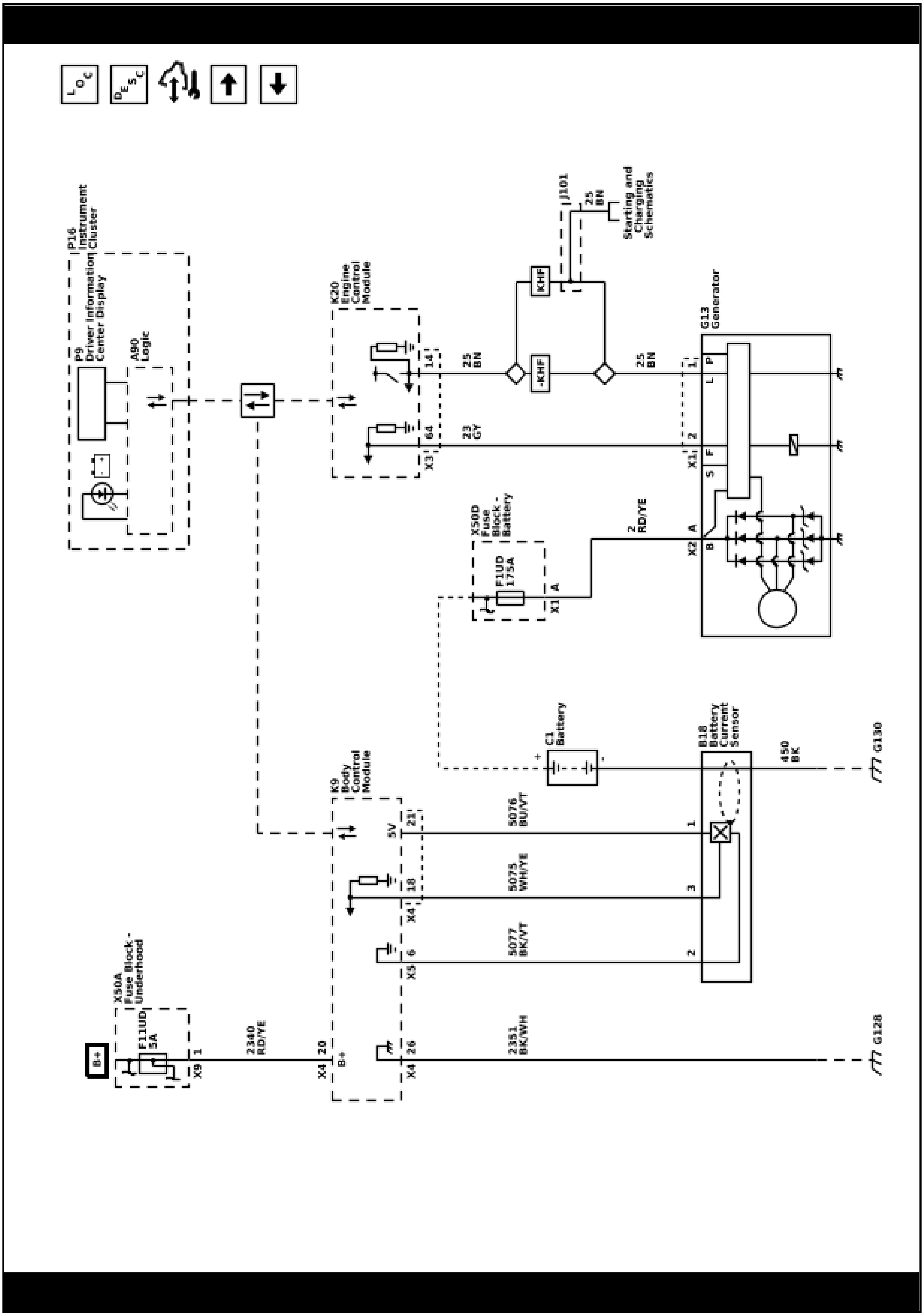

X50D Fuse Block - Battery
F3UD 400A
F2UD 175A
X3 A
X2 A
C1 Battery
+
-
2350 BK
G130
242 RD/GN
625 YE/BK
X1 36
IGN
47
439 VT/GN
J147
439 VT/GN
X6 A
X3 F2
A1
X50A Fuse Block - Underhood
F69UA 30A
30
86
KR27 Starter Relay
87
85
KR73 Ignition Main Relay
F46UA 15A
X3 F1
C3
2 RD/YE
6 YE
4450 BK
X2 A
X1 1
M64 Starter Motor
M
G140
-BTM
BTM
K84 Keyless Entry Control Module
K9 Body Control Module
5V
X3 22
15
-BTM
-BTM
1020 WH/VT
J218
1073 WH/BK
1020 WH/VT
1
2
S39 Ignition Switch
III
II
I
O
Power Moding Schematics
Power Moding Schematics
K20 Engine Control Module
P/N
X1 16
1786 WH/GY
X1 3
T12 Automatic Transmission Assembly
Q8 Control Solenoid Valve Assembly
X2 F
1786 WH
B15 Transmission Internal Mode Switch
Automatic Transmission Controls Schematics
50 GY
X2 A
K71 Transmission Control Module
X1 5
451 BK/WH
G114
5995441

Starting and Charging Schematics (Starting(MGM/MGU))


X50D
Fuse
Block -
Battery
F8UD
500A
F1UD
175A
X3 A
X1 A
K20
Engine
Control
Module
IGN
X1 65
22
242
RD/GN
625
YE/BK
439
VT/GN
J147
-BTM
BTM
K84
Keyless
Entry
Control
Module
C1
Battery
+
-
X6 A
X3 B2
A1
X50A
Fuse Block -
Underhood
F58UA
30A
KR73
Ignition Main
Relay
F46UA
15A
30
86
KR27
Starter
Relay
87
85
X3 B1
C3
K9
Body
Control
Module
5V
X3 22
15
-BTM
-BTM
1020
WH/VT
J218
1073
WH/BK
1020
WH/VT
1
2
S39
Ignition
Switch
I
II
III
Power
Moding
Schematics
Power
Moding
Schematics
2350
BK
2
RD/YE
6
YE
4450
BK
X2 A
X1 1
M64
Starter
Motor
M
G130
G140

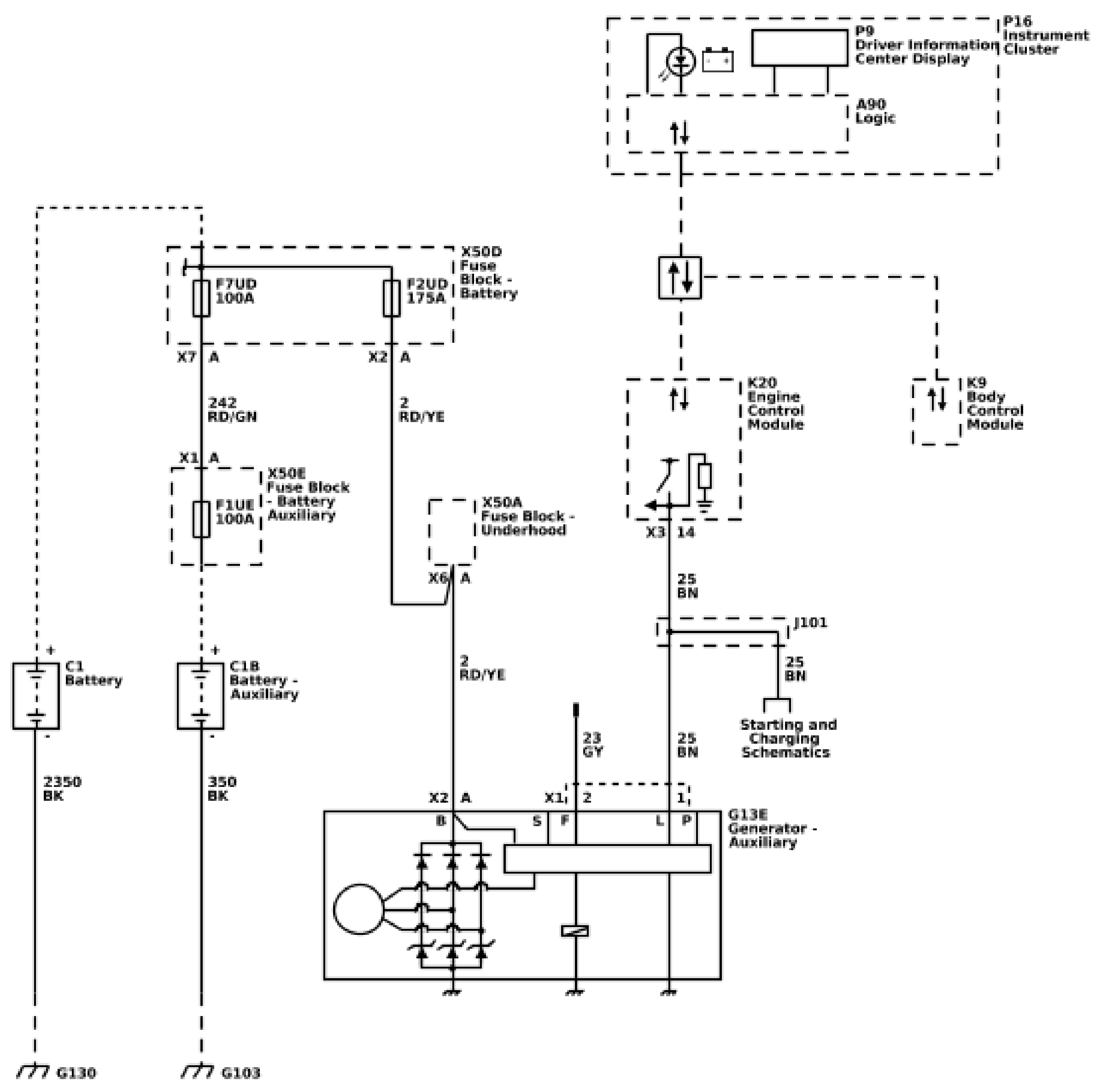
5995442

Starting and Charging Schematics (Charging (L8T))


P16 Instrument Cluster
P9 Driver Information Center Display
A90 Logic
K20 Engine Control Module
J101
25 BN
Starting and Charging Schematics
KHF
-KHF
14
25 BN
23 GY
64
X3
G13 Generator
1 P
L
X1 2 F
S
X2 B A
X50D Fuse Block - Battery
F1UD 175A
X1 A
2 RD/YE
C1 Battery
+
-
B18 Battery Current Sensor
450 BK
G130
K9 Body Control Module
5V
21
5076 BU/VT
1
18
5075 WH/YE
3
X4
6
X5
5077 BK/VT
2
X50A Fuse Block - Underhood
B+
F11UD 5A
X9 1
2340 RD/YE
X4 20 B+
X4 26
2351 BK/WH
G128

5995443

Starting and Charging Schematics (Charging Auxiliary (L8T))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Instrument
Cluster
P9
Driver Information
Center Display
A90
Logic
K20
Engine
Control
Module
K9
Body
Control
Module
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25
BN
J101
25
BN
Starting and
Charging
Schematics
X50D
Fuse
Block -
Battery
F7UD
100A
F2UD
175A
X7 A
X2 A
242
RD/GN
2
RD/YE
X1 A
X50E
Fuse Block
- Battery
Auxiliary
F1UE
100A
X50A
Fuse Block -
Underhood
X6 A
2
RD/YE
23
GY
25
BN
X2 A
X1 2
1
B
S
F
L
P
G13E
Generator -
Auxiliary
+
C1
Battery
-
+
C1B
Battery -
Auxiliary
-
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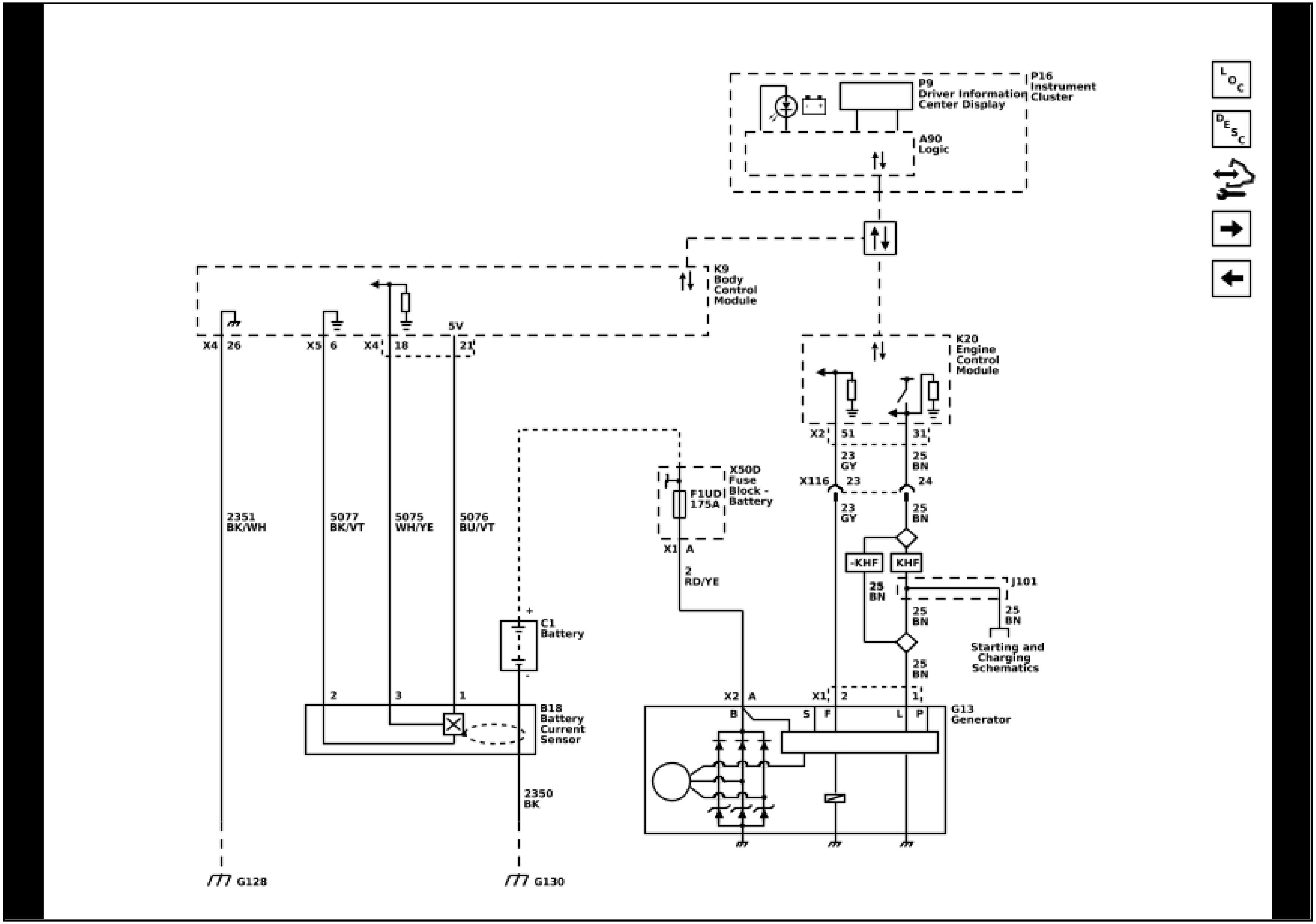
BK
350
BK
G130
G103

5995444

Starting and Charging Schematics (Charging (L5P))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A90 Logic
K9 Body Control Module
K20 Engine Control Module
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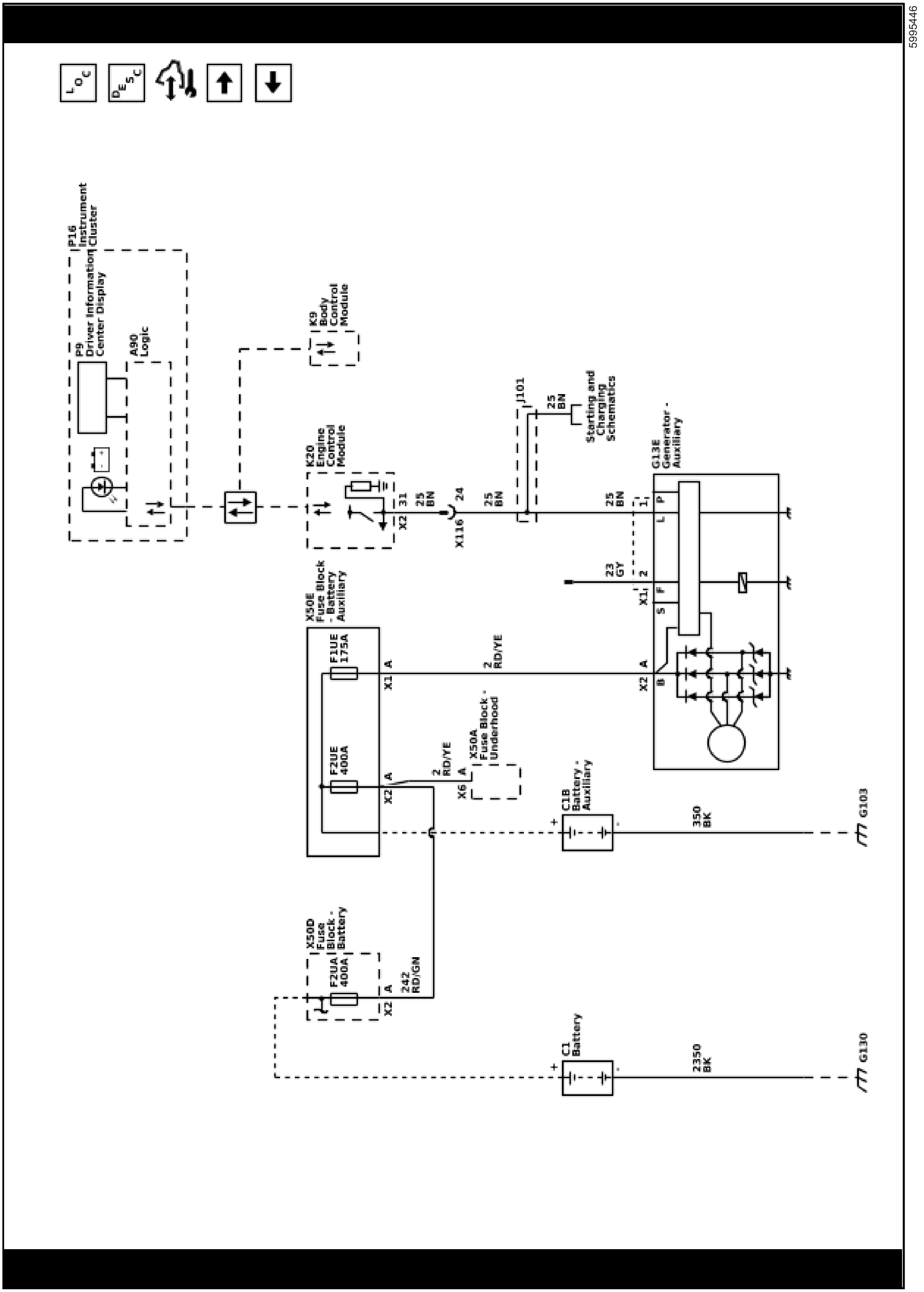
X5 6
X4 18
5V
21
X2 51
31
23 GY
25 BN
X116 23
24
2351 BK/WH
5077 BK/VT
5075 WH/YE
5076 BU/VT
X50D Fuse Block - Battery
F1UD 175A
X1 A
2 RD/YE
-KHF
KHF
J101
Starting and Charging Schematics
C1 Battery
+
-
2
3
1
B18 Battery Current Sensor
2350 BK
X2 A
X1 2
1
B
S
F
L
P
G13 Generator
G128
G130

5995445

Starting and Charging Schematics (Charging Auxiliary (L5P))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25 BN
Starting and Charging Schematics
G13E Generator - Auxiliary
25 BN
1 P
L
X1 2 F
23 GY
S
X2 A B
2 RD/YE
X50E Fuse Block - Battery Auxiliary
F1UE 175A
X1 A
F2UE 400A
X2 A
2 RD/YE
X6 A
X50A Fuse Block - Underhood
C1B Battery - Auxiliary
+
-
350 BK
G103
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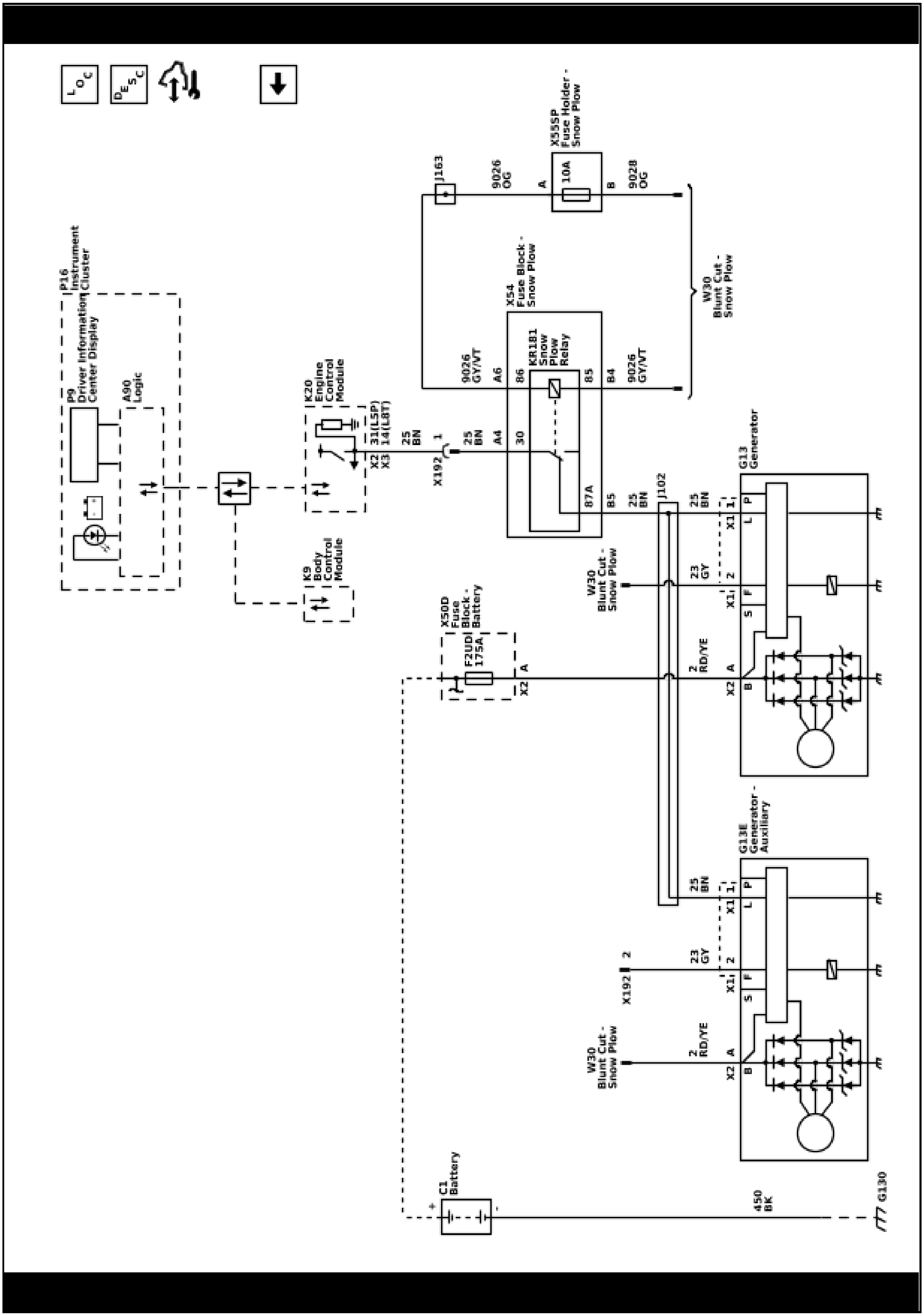
242 RD/GN
C1 Battery
2350 BK
G130

Starting and Charging Schematics (Charging (VYU))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P9 Driver Information Center Display
A90 Logic
K20 Engine Control Module
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X3 14(L8T)
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1
X192
K9 Body Control Module
X50D Fuse Block - Battery
F2UD 175A
X2 A
J163
9026 OG
9026 GY/VT
A6
86
30
A4
KR181 Snow Plow Relay
85
87A
B4
B5
X54 Fuse Block - Snow Plow
A
10A
B
X55SP Fuse Holder - Snow Plow
9028 OG
W30 Blunt Cut - Snow Plow
J102
G13 Generator
X1 1 P
L
X1 2 F
S
23 GY
2 RD/YE
X2 A B
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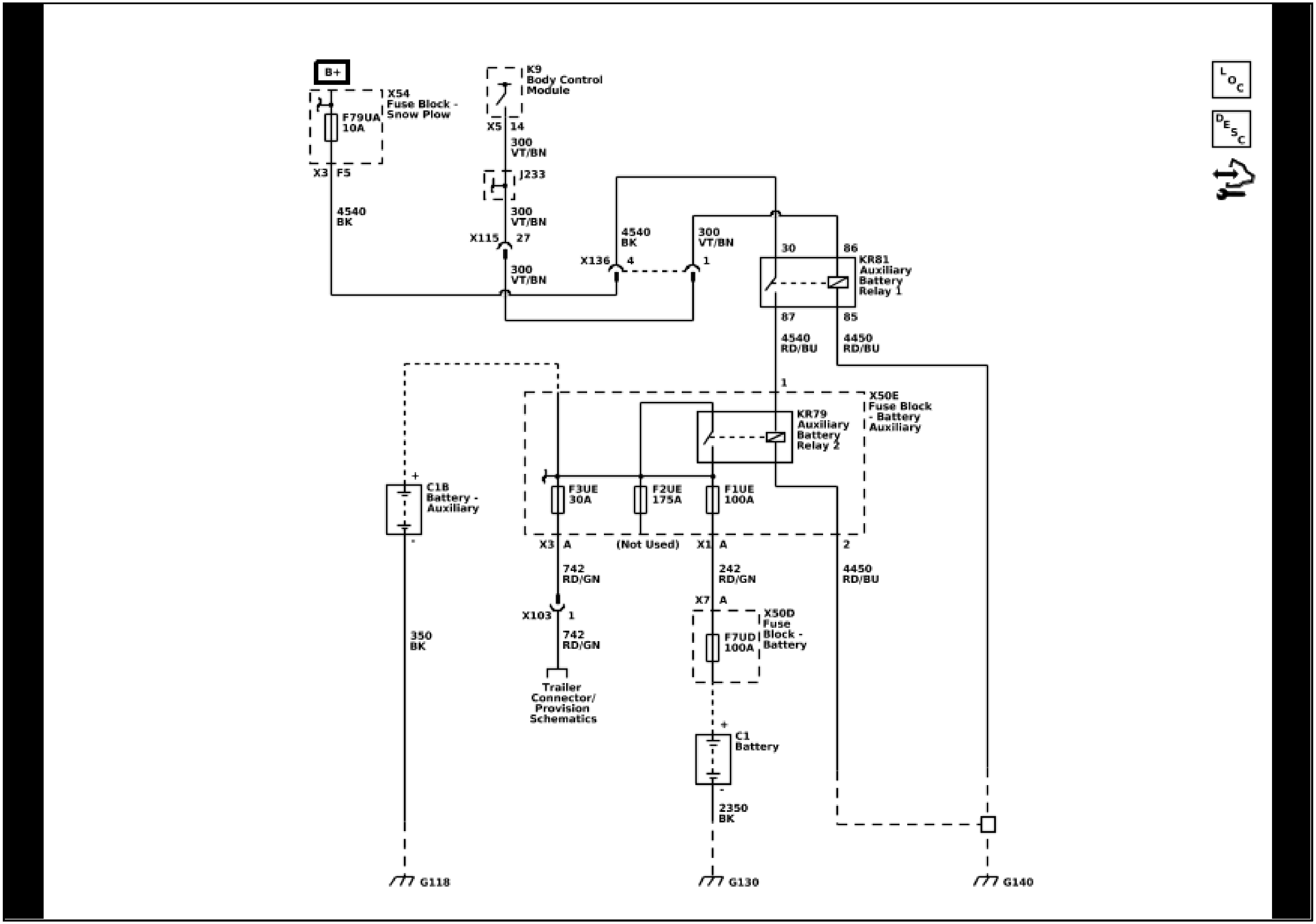
C1 Battery
+
-
450 BK
G130
2

5995447

Auxiliary Battery Schematics (Auxiliary Battery Relays (K4B))


B+
X54
Fuse Block - Snow Plow
F79UA
10A
X3 F5
4540
BK
K9
Body Control Module
X5 14
300
VT/BN
J233
300
VT/BN
X115 27
300
VT/BN
X136 4
4540
BK
1
300
VT/BN
30
86
KR81
Auxiliary Battery Relay 1
87
85
4540
RD/BU
4450
RD/BU
1
X50E
Fuse Block - Battery Auxiliary
KR79
Auxiliary Battery Relay 2
F3UE
30A
F2UE
175A
F1UE
100A
X3 A
(Not Used)
X1 A
2
742
RD/GN
242
RD/GN
4450
RD/BU
X103 1
742
RD/GN
Trailer Connector/ Provision Schematics
X7 A
X50D
Fuse Block - Battery
F7UD
100A
C1
Battery
+
-
2350
BK
C18
Battery - Auxiliary
+
-
350
BK
G118
G130
G140
LOC
DESC
5995448

Description and Operation

Battery Description and Operation

Warning: Batteries produce explosive gases, contain corrosive acid, and supply levels of electrical current high enough to cause burns. Therefore, to reduce the risk of personal injury when working near a battery:

- ***Always shield your eyes and avoid leaning over the battery whenever possible.***
- ***Do not expose the battery to open flames or sparks.***
- ***Do not allow the battery electrolyte to contact the eyes or the skin. Flush immediately and thoroughly any contacted areas with water and get medical help.***
- ***Follow each step of the jump starting procedure in order.***
- ***Treat both the booster and the discharged batteries carefully when using the jumper cables.***

Batteries that are no longer wanted must be disposed of by an approved battery recycler and must never be thrown in the trash or sent to a landfill.

Batteries that are not part of the vehicle itself, not the battery under the hood, must only be transported on public streets for business purposes via approved hazardous material transportation procedures.

Battery storage, charging and testing facilities in repair shops must meet various requirements for ventilation, safety equipment, material segregation, etc.

The maintenance free battery is standard. There are no vent plugs in the cover. The battery is completely sealed except for 2 small vent holes in the side. These vent holes allow the small amount of gas that is produced in the battery to escape.

The battery has 3 functions as a major source of energy:

- Engine cranking
- Voltage stabilizer
- Alternate source of energy with generator overload

Battery Low Start Vehicle Message

The body control module (BCM) monitors battery positive voltage to determine battery state of charge. If one or more of the BCM battery positive voltage terminals measure less than approximately 11.6V compared to the BCM ground circuits, this message will display and four chimes may sound. Start the vehicle immediately. If the vehicle is not started and the battery continues to discharge, the climate controls, heated seats, and audio systems will shut off and the vehicle may require a jump start. These systems will function again after the vehicle is started.

Battery Ratings

A battery has 2 ratings:

- Cold cranking amperage
- Amperage hours

When a battery is replaced use a battery with similar ratings. See battery specification label on the original battery.

Amperage Hours

The amperage hour rating tells you how much amperage is available when discharged evenly over a 20 hour period. The amperage hour rating is cumulative, so in order to know how many constant amperage the battery will output for 20 h, you have to divide the amperage hour rating by 20. Example: If a battery has an amperage hour rating of 74, dividing by 20 = 3.75. Such a battery can carry a 3.75 A load for 20 hours before dropping to 10.5 V. (10.5 V is the fully discharged level, at which point the battery needs to be recharged.) A battery with an amperage hour rating of 55 will carry a 2.75 A load for 20 hours before dropping to 10.5 V.

Cold Cranking Amperage

The cold cranking amperage is an indication of the ability of the battery to crank the engine at cold temperatures. The cold cranking amperage rating is the minimum amperage the battery must maintain for 30 seconds at −18°C (0°F) while maintaining at least 7.2 V. See battery label for the cold cranking amperage rating of this battery.

Charging System Description and Operation

Electrical Power Management Overview

The electrical power management system is designed to monitor and control the charging system and send diagnostic messages to alert the driver of possible problems with the battery and generator. This electrical power management system primarily utilizes existing on-board computer capability to maximize the effectiveness of the generator, to manage the load, improve battery state-of-charge and life, and minimize the system's impact on fuel economy. The electrical power management system performs 3 functions:

- Monitor the battery voltage and estimate the battery condition
- Take corrective actions by boosting idle speeds, and adjusting the regulated voltage
- Perform diagnostics and driver notification

The battery condition is estimated during ignition/vehicle off and during ignition/vehicle on. During ignition/vehicle off the state-of-charge of the battery is determined by measuring the open-circuit voltage. The state-of-charge is a function of the acid concentration and the internal resistance of the battery, and is estimated by reading the battery open circuit voltage when the battery has been at rest for several hours.

Any time the ignition/vehicle is on, the vehicle algorithm continuously estimates battery state-of-charge based on adjusted net amp hours, battery capacity, initial state-of-charge, and calculated temperature.

While the engine is running, the battery degree of discharge is primarily determined by the integrated battery current sensor, to obtain net amp hours.

In addition, the electrical power management function is designed to perform regulated voltage control to improve battery state-of-charge, battery life, and fuel economy. This is accomplished by using knowledge of the battery state-of-charge and temperature to set the charging voltage to an optimum battery voltage level for recharging without detriment to battery life.

Charging System Components

Generator

The engine drive belt drives the generator. When the rotor is spun, it induces an alternating current (AC) into the stator windings. The AC voltage is then sent through a series of diodes for rectification. The rectified voltage has been converted into a direct current (DC) for use by the vehicles electrical system to maintain electrical loads and the battery charge. The voltage regulator integral to the generator controls the output of the generator; It is not serviceable. The voltage regulator controls the amount of current provided to the rotor. If the generator has field control circuit fault, the generator defaults to an output voltage of 13.8 V.

The generator is serviced as a complete assembly. If there is a diagnosed fault in the generator, it must be replaced as an assembly.

Generator Pulley

The pulley drives the Generator via the engine drive belt. There are 2 types of pulleys:

1. Conventional solid Pulley which is bolted to the Generator stator shaft. This Pulley can be serviced separately.

2. One Way Clutch Pulley or Overrunning Alternator Decoupler Pulley allows the Generator to spin freely when the engine rapidly slows down on sudden deceleration. This part is not serviceable and the Generator needs to be replaced as an assembly.

Body Control Module (BCM)

The BCM communicates with the Engine Control Module (ECM) and the instrument cluster for electrical power management operation. The BCM determines the output of the generator and sends the information to the ECM for control of the generator turn on signal circuit. It monitors the generator field duty cycle signal circuit information sent from the ECM for control of the generator. It monitors the battery current sensor, the battery positive voltage circuit, and estimates battery temperature to determine battery state of charge. The BCM also performs idle boost.

Battery Current Sensor (if applicable)

The Battery Current Sensor is a serviceable component that is connected to the negative battery cable at the battery. The battery current sensor is a 3-wire hall effect current sensor. The battery current sensor monitors the battery current. It directly inputs to the BCM. It creates a 5 volt Pulse Width Modulation (PWM) signal of 128 Hz with a duty cycle of 0–100%. Normal duty cycle is between 5–95%. Between 0–5% and 95–100% are for diagnostic purposes.

Battery Sensor Module (if applicable)

The BCM monitors the Battery Sensor Module for battery state of current, state of health, and battery charge via serial data. If the battery is determined to be in poor state of health or having a low state of charge, the BCM will not allow the ECM to perform an auto-stop.

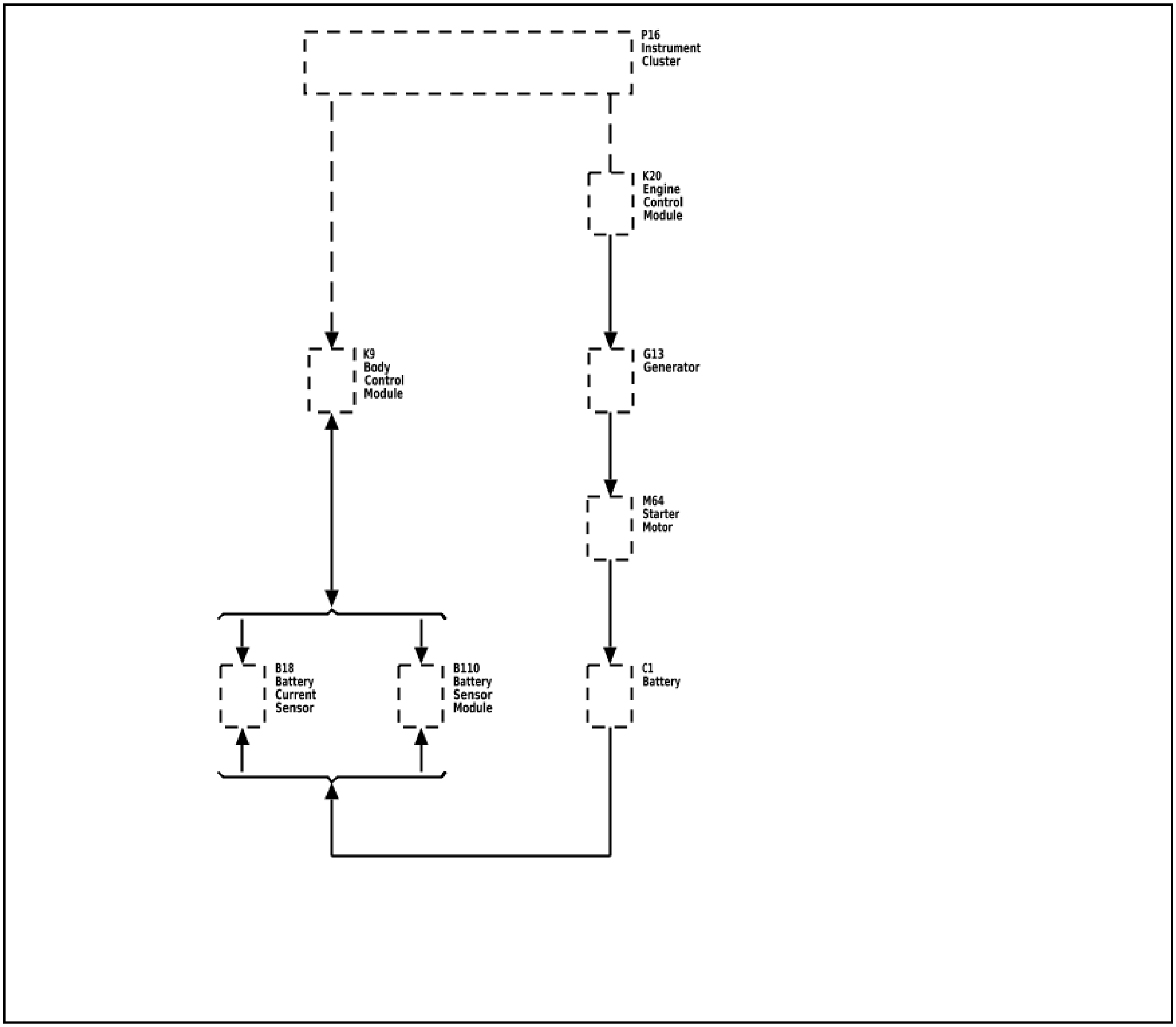
Engine Control Module (ECM)

When the engine is running, the generator turn-on signal is sent to the generator from the ECM, turning on the regulator. The generator's voltage regulator controls current to the rotor, thereby controlling the output voltage. The rotor current is proportional to the electrical pulse width supplied by the regulator. When the engine is started, the regulator senses generator rotation by detecting AC voltage at the stator through an internal wire. Once the engine is running, the regulator varies the field current by controlling the pulse width. This regulates the generator output voltage for proper battery charging and electrical system operation. The generator field duty terminal is connected internally to the voltage regulator and externally to the ECM. When the voltage regulator detects a charging system problem, it grounds this circuit to signal the ECM that a problem exists. The ECM monitors the generator field duty cycle signal circuit, and receives control decisions based on information from the BCM.

Instrument Cluster

As a means of displaying the charging system functions, some vehicles may be equipped with a voltmeter gauge on the instrument cluster and/or a system voltage display in the driver information center. These will indicate the current vehicle system voltage.

The instrument cluster also provides customer notification if there is a concern with the charging system. There are two means of notification: a charge indicator on the instrument cluster and/or a service system message displayed on the Driver Information Center (DIC) if equipped.


P16
Instrument
Cluster
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Engine
Control
Module
K9
Body
Control
Module
G13
Generator
M64
Starter
Motor
B18
Battery
Current
Sensor
B110
Battery
Sensor
Module
C1
Battery

3603724

Charging System Operation

The purpose of the charging system is to maintain the battery charge and vehicle loads. There are 6 modes of operation and they include:

- Battery Sulfation Mode
- Charge Mode
- Fuel Economy Mode
- Head lamp Mode
- Start Up Mode
- Voltage Reduction Mode

The ECM Controls the Generator through the generator turn–on signal circuit, also known as the Generator L-terminal. The ECM monitors the generator performance though the Generator field duty cycle signal circuit, also known as the generator F-terminal.

The Generator turn–on signal (Generator L-terminal) is a Pulse Width Modulation (PWM) signal of 128 Hz with a duty cycle of 0–100%. Normal duty cycle is between 5–95%. 0–5% and 95–100% are for diagnostic purposes, with 0–5% monitoring for an open circuit and 95–100% monitoring for a short to ground at a fixed 13.8 V. The following table shows the commanded duty cycle and output voltage of the Generator:

Commanded Duty Cycle	Generator Output Voltage (+/- .25 V)
0–5%	13.8 V
10%	11 V
20%	11.56 V
30%	12.13 V
40%	12.69 V
50%	13.25 V
60%	13.81 V
70%	14.38 V
80%	14.94 V
90%	15.5 V
95–100%	13.8 V

The Generator provides a PWM feedback signal of the Generator voltage output through the Generator field duty cycle signal circuit to the ECM. This information is sent to the Body Control Module (BCM). The Generator field duty cycle signal (Generator F-terminal) is a PWM signal of 60–460 Hz with a duty cycle of 0–100%. Normal duty cycle is between 5–100%. 0–5% is reserved for diagnostic purposes.

As the charging systems works to maintain the battery charge and manage vehicle electrical loads, it is normal for the voltmeter gauge on the instrument cluster or the system voltage displayed in the DIC to fluctuate or change. This does not indicate a malfunction. Depending on the battery state of charge and the vehicle electrical load, these values may be anywhere from 12.5 V to 15.5 V.

Charging System Modes

Battery Sulfation Mode

The BCM will enter this mode when the interpreted Generator output voltage is less than 13.2 V for 45 minutes. When this condition exists the BCM will enter Charge Mode for 2–3 minutes. The BCM will then determine which mode to enter depending on voltage requirements.

Charge Mode

The BCM will enter Charge Mode when ever one of the following conditions are met:

- Windshield wipers are ON for more than 3 s.
- Climate Control Voltage Boost Mode Request is true, as sensed by the HVAC control module via serial data. High speed cooling fan, rear defogger, and HVAC high speed blower operation can cause the BCM to enter the Charge Mode.
- The estimated battery temperature is less than 0° C (32°F).
- Battery State of Charge is less than 80%.
- Vehicle speed is greater than 145 km/h (90 mph)
- A current sensor malfunction exists.
- System voltage is determined to be below 12.56 V

When any one of these conditions is met, the system will set targeted generator output voltage to a charging voltage between 13.9–15.5 V, depending on the battery state of charge and estimated battery temperature.

Fuel Economy Mode

The BCM will enter Fuel Economy Mode when the estimated battery temperature is at least 0°C (32°F) but less than or equal to 80°C (176°F), the calculated battery current is less than 15 A and greater than −8 A, and the battery state-of-charge is greater than or equal to 80%. Its targeted generator output voltage is the open circuit voltage of the battery and can be between 12.5–13.1 V. When fuel economy mode is active, the generator is not charging, only maintaining open circuit battery voltage. The BCM will exit this mode and enter Charge Mode when any of the conditions described above are present.

Headlamp Mode

The BCM will enter Headlamp Mode when ever the head lamps are ON (high or low beams). Voltage will be regulated between 13.9–14.5 V.

Start Up Mode

When the engine is started the BCM sets a targeted generator output voltage of 14.5 V for 30 s.

Tow/Haul Mode (if applicable)

Pressing the Tow/Haul Mode button located on the center stack, the vehicle system voltage is raised and the remote (non-vehicle) battery will be charged. Having the headlamps on will raise the system voltage and if the Tow/Haul button is applied it will not serve any purpose. The voltage is regulated between 13.9-14.5 V.

Instrument Cluster Operation

Charge Indicator Operation

The instrument cluster illuminates the charge indicator and displays a warning message in the driver information center if equipped, when the one or more of the following occurs:

- The ECM detects that the generator output is less than 11 V or greater than 16 V. The instrument cluster receives a serial data message from the ECM requesting illumination.
- The instrument cluster determines that the system voltage is less than 11 V or greater than 16 V for more than 30 s. The instrument cluster receives a serial data message from the BCM indicating there is a system voltage range concern.
- The instrument cluster performs the displays test at the start of each ignition cycle. The indicator illuminates for approximately 3 s.

Driver Information Center Message: BATTERY NOT CHARGING SERVICE CHARGING SYSTEM or SERVICE BATTERY CHARGING SYSTEM

The BCM and the ECM will send a serial data message to the driver information center for the BATTERY NOT CHARGING SERVICE CHARGING SYSTEM or SERVICE BATTERY CHARGING SYSTEM message to be displayed. It is displayed when a charging system DTC is a current DTC. The message is turned off when the conditions for clearing the DTC have been met.

Voltmeter Gauge and/or System Voltage Display (if equipped)

As a means of displaying the charging system functions, some vehicles may be equipped with a voltmeter gauge on the instrument cluster and/or a system voltage display in the driver information center. These will indicate the current vehicle system voltage.

As the charging systems works to maintain the battery charge and manage vehicle electrical loads, it is normal for the voltmeter gauge on the instrument cluster or the system voltage display in the driver information center to fluctuate or change. This does not indicate a malfunction. Depending on the battery state of charge and the vehicle electrical load, these values may be anywhere from 12.5 V to 15.5 V.

Electrical Power Management Description and Operation

Electrical Power Management

The electrical power management is used to monitor and control the charging system and alert the driver of possible problems within the charging system. The electrical power management system makes the most efficient use of the generator output, improves the battery state-of-charge, extends battery life, and manages system electrical loads.

The load shed operation is a means of reducing electrical loads during a low voltage or low battery state-of-charge condition.

The idle boost operation is a means of improving generator performance during a low voltage or low battery state-of-charge condition.

Each electrical power management function, either idle boost or load shed, is activated in incremental steps. For example, idle boost 1 must be active before idle boost 2 can be active. The criteria used by the body control module (BCM) to regulate electrical power management are outlined below:

Idle Boost and Load Shed With Current Sensor

Function	Battery Temperature Calculation	Battery Voltage Calculation	Amp-Hour Calculation	Action Taken
Idle Boost 1 Start	Less Than −15°C (5°F)	Less Than 13 V	—	First level Idle boost requested
Idle Boost 1 Start	—	—	Battery has a net loss greater than 0.6 Ah	First level Idle boost requested
Idle Boost 1 Start	—	Less Than 11 V	—	First level Idle boost requested
Idle Boost 1 End	Greater Than −10°C (14°F)	Greater Than 12 V	Battery has a net loss less than 0.2 Ah	First level Idle boost request cancelled
Idle Boost 2 Start	—	—	Battery has a net loss greater than 1.6 Ah	Second level Idle boost requested
Idle Boost 2 Start	—	Less Than 11 V	—	Second level Idle boost requested
Idle Boost 2 End	—	Greater Than 12 V	Battery has a net loss less than 0.8 Ah	Second level Idle boost request cancelled
Load Shed 1 Start	—	—	Battery has a net loss of 4 Ah	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 20% of their cycle
Load Shed 1 Start	—	Less Than 11 V	—	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 20% of their cycle
Load Shed 1 End	—	Greater Than 12 V	Battery has a net loss of less than 2 Ah	Clear Load Shed 1
Idle Boost 3 Start	—	—	Battery has a net loss of 10 Ah	Third level Idle boost requested
Idle Boost 3 Start	—	Less Than 11 V	—	Third level Idle boost requested
Idle Boost 3 End	—	Greater Than 12 V	Battery has a net loss of less than 6.0 Ah	Third level Idle boost request cancelled

Idle Boost and Load Shed With Current Sensor (cont'd)

Function	Battery Temperature Calculation	Battery Voltage Calculation	Amp-Hour Calculation	Action Taken
Load Shed 2 Start	—	—	Battery has a net loss greater than 12 Ah	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 50% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 2 Start	—	Less Than 11 V	—	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 50% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 2 End	—	Greater Than 12 V	Battery has a net loss of less than 8 Ah	Clear Load Shed 2
Load Shed 3 Start	—	Less Than 11.9 V	Battery has a net loss greater than 20 Ah	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 100% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 3 Start	—	Less Than 11 V	—	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 100% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 3 End	—	Greater Than 12.6 V	Battery has a net loss of less than 13 Ah	Clear Load Shed 3

Idle Boost and Load Shed Without Current Sensor (based on battery voltage)

Function	Battery Temperature Calculation	Battery Voltage Calculation	Action Taken
Idle Boost 1 Start	Less Than −15°C (5°F)	Less Than 13 V	First level Idle boost requested
Idle Boost 1 Start	—	Less Than 12.6 V	First level Idle boost requested
Idle Boost 1 End	Greater Than −15°C (5°F)	—	First level Idle boost request cancelled
Idle Boost 1 End	—	Greater Than 13 V	First level Idle boost request cancelled
Idle Boost 2 Start	—	Less Than 12.4 V	Second level Idle boost requested
Idle Boost 2 End	—	Greater Than 12.5 V	Second level Idle boost request cancelled
Load Shed 1 Start	—	Less Than 12.3 V	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 20% of their cycle
Load Shed 1 End	—	Greater Than 12.4 V	Clear Load Shed 1
Idle Boost 3 Start	—	Less Than 10 V	Third level Idle boost requested

Idle Boost and Load Shed Without Current Sensor (based on battery voltage) (cont'd)

Function	Battery Temperature Calculation	Battery Voltage Calculation	Action Taken
Idle Boost 3 End	—	Greater Than 12.3 V	Third level Idle boost request cancelled
Load Shed 2 Start	—	Less Than 12.1 V	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 50% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 2 End	—	Greater Than 12.2 V	Clear Load Shed 2
Load Shed 3 Start	—	Less Than 11.9 V	Rear Defrost, Heated Mirrors, Heated Seats, HVAC cycled OFF for 100% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 3 End	—	Greater Than 12.0 V	Clear Load Shed 3

Load Shed System Description and Operation

Electrical Power Management

The electrical power management is used to monitor and control the charging system and alert the driver of possible problems within the charging system. The electrical power management system makes the most efficient use of the generator output, improves the battery state-of-charge, extends battery life, and manages system electrical loads.

The load shed operation is a means of reducing electrical loads during a low voltage or low battery state-of-charge condition.

The idle boost operation is a means of improving generator performance during a low voltage or low battery state-of-charge condition.

Each electrical power management function, either idle boost or load shed, is discrete. No two functions are active at the same time. Idle boost is activated in incremental steps, idle boost 1 must be active before idle boost 2 can be active. The criteria used by the body control module (BCM) to regulate electrical power management are outlined below:

Function	Battery Temperature Calculation	Battery Voltage Calculation	Amp-Hour Calculation	Action Taken
Idle Boost 1 Start	Less Than −15°C (5°F)	Less Than 13 V	—	First level Idle boost requested
Idle Boost 1 Start	—	—	Battery has a net loss greater than 0.6 AH	First level Idle boost requested
Idle Boost 1 Start	—	Less Than 10.9 V	—	First level Idle boost requested
Idle Boost 1 End	Greater Than −15°C (5°F)	Greater Than −12 V	Battery has a net loss less than 0.2 AH	First level Idle boost request cancelled
Load Shed 1 Start	—	—	Battery has a net loss of 4 AH	Rear Defrost, Heated Mirrors, Heated Seats cycled OFF for 20% of their cycle

Function	Battery Temperature Calculation	Battery Voltage Calculation	Amp-Hour Calculation	Action Taken
Load Shed 1 Start	—	Less Than 10.9 V	—	Rear Defrost, Heated Mirrors, Heated Seats cycled OFF for 20% of their cycle
Load Shed 1 End	—	Greater Than 12 V	Battery has a net loss of less than 2 AH	Clear Load Shed 1
Idle Boost 2 Start	—	—	Battery has a net loss greater than 1.6 AH	Second level Idle boost requested
Idle Boost 2 Start	—	Less Than 10.9 V	—	Second level Idle boost requested
Idle Boost 2 End	—	Greater Than 12 V	Battery has a net loss less than 0.8 AH	Second level Idle boost request cancelled
Idle Boost 3 Start	—	—	Battery has a net loss of 10.0 AH	Third level Idle boost requested
Idle Boost 3 Start	—	Less Than 10.9 V	—	Third level Idle boost requested
Idle Boost 3 End	—	Greater Than 12 V	Battery has a net loss of less than 6.0 AH	Third level Idle boost request cancelled
Load Shed 2 Start	—	Less Than 10.9 V	Battery has a net loss greater than 12 AH	Rear Defrost, Heated Mirrors, Heated Seats cycled OFF for 50% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 2 Start	—	Less Than 10.9 V	—	Rear Defrost, Heated Mirrors, Heated Seats cycled OFF for 50% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 2 End	—	Greater Than 12.6 V	Battery has a net loss of less than 10.5 AH	Clear Load Shed 2
Load Shed 3 Start	—	Less Than 11.9 V	Battery has a net loss greater than 20 AH	Rear Defrost, Heated Mirrors, Heated Seats cycled OFF for 100% of their cycle. The BATTERY SAVER ACTIVE message will be displayed on the DIC
Load Shed 3 End	—	Greater Than 12.6 V	Battery has a net loss of less than 15 AH	Clear Load Shed 3

Starting System Description and Operation

Starter Motor Operation (Without KL9)

The starter motors are non-repairable. They have pole pieces that are arranged around the armature. Both solenoid windings are energized. The pull-in winding circuit is completed to the ground through the starter motor. The windings work together magnetically to pull and hold in the plunger. The plunger moves the shift lever. This action causes the starter drive assembly to rotate on the armature shaft spline as it engages with the flywheel ring gear on the engine. Moving at the same time, the plunger also closes the solenoid switch contacts in the starter solenoid. Full battery voltage is applied directly to the starter motor and it cranks the engine.

As soon as the solenoid switch contacts close, current stops flowing thorough the pull-in winding because battery voltage is applied to both ends of the windings. The hold-in winding remains energized. Its magnetic field is strong enough to hold the plunger, shift lever, starter drive assembly, and solenoid switch contacts in place to continue cranking the engine. When the engine starts, pinion overrun protects the armature from excessive speed until the switch is opened.

When the crank signal is removed, the starter relay opens and battery voltage is removed from the starter solenoid S terminal. Current flows from the motor contacts through both windings to the ground at the end of the hold-in winding. However, the direction of the current flow through the pull-in winding is now opposite the direction of the current flow when the winding was first energized.

The magnetic fields of the pull-in and hold-in windings now oppose one another. This action of the windings, along with the help of the return spring, causes the starter drive assembly to disengage and the solenoid switch contacts to open simultaneously. As soon as the contacts open, the starter circuit is turned off.

Enhanced Starter Motor Operation (KL9)

The Engine Stop/Start system in GM vehicles automatically turns off the engine when the vehicle comes to a stop under certain driving conditions, and can quickly restart the engine in about 0.3 seconds when commanded to do so.

In order to smoothly restart the engine as quickly as possible while managing the greater number of engine starts, the Stop/Start system uses an enhanced starter motor that operates differently from a conventional starter motor. It has a high performance electric motor and a stronger pinion engagement mechanism than a conventional starter. It also has independent control of the pinion and motor.

The enhanced starter motor continues using the typical pinion engagement mechanism with a starter solenoid that drives the pinion gear to engage or disengage the flywheel of the engine. When engaged, the starter motor can rotate the engine flywheel and, in turn, the crankshaft.

On the enhanced starter of a Stop/Start system the operation is done in two separate functions inside the solenoid, Starter Motor and Pinion Actuator. Each function controlled individually by the ECM. There are two separate relays to control the two separate parts of the enhanced solenoid:

- KR27 Starter Motor Relay
- KR27C Starter Pinion Actuator Relay

The two individually-controlled relays allow for smooth engagement of the pinion gear into the flywheel with minimum noise and wear.

When the vehicle is coming to a stop, just before the engine stops rotating (at approximately 50 RPM) during stop/start operation, the ECM energizes the Starter Pinion Solenoid Actuator Relay to easily push the pinion gear into the flywheel gear without gear clash. (Fig. 8) When the engine stops rotating during Stop/ Start operation (Auto Stop mode), the starter pinion gear is fully engaged, ready for the starter motor to become energized to quickly start the engine again.

A secondary need for the starter pinion to be driven into the flywheel gear before the engine stops rotating is to address quickly changing demands on the engine. For example, when a driver is slowing nearly to a stop — and the Stop/Start system is preparing for Auto Stop mode — but suddenly decides to release the brake and accelerate

In this situation, the engine has already stopped rotating, or nearly so. A conventional starter cannot restart the engine until the engine has completely stopped. However, with the enhanced starter, the starter pinion gear is fully engaged and ready to begin rotating the engine even before it fully stops turning. Otherwise, the engine would actually have to stop rotating before the pinion can engage smoothly to begin a restart.

To prevent a lag in engine operation, the ECM uses predictive speed matching of the flywheel gear speed and the pinion gear speed to engage the pinion gear into the flywheel gear without gear clash before the engine fully stops. By predicting how long it takes the starter motor to spin up using an algorithm, the pinion gear speed can be matched to the flywheel gear speed. The result is an almost instant restart that is possible at extremely low engine speeds.

Circuit Description

Keyless Start

When the Ignition mode switch is placed in the crank position, a discrete signal is supplied to the body control module (BCM) notifying it that the ignition is in the crank position. The BCM then sends a serial data message to the engine control module (ECM) that crank has been requested. The ECM then verifies that the brake pedal is applied and for manual transmission the clutch is fully depressed or for automatic transmission is in Park/Neutral. If it is, the ECM then supplies 12 V to the control circuit of the starter relay. When this occurs, battery positive voltage is supplied through the switch side of the crank relay to the S terminal of the starter solenoid.

Key Start

When the ignition switch is placed in the Start position, a discrete signal is supplied to the body control module (BCM) notifying it that the ignition is in the Start position. The BCM then sends a message to the engine control module (ECM) notifying it that CRANK has been requested. The ECM verifies that the transmission is in Park or Neutral. If it is, the ECM then supplies 12 V to the control circuit of the crank relay. When this occurs, battery positive voltage is supplied through the switch side of the crank relay to the S terminal of the starter solenoid.

Section 5

HVAC

Heading, Ventilation, and Air Conditioning 5-3
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Heating and Air Conditioning System Description and Operation 5-3
HVAC - Automatic 5-4
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Manual HVAC Description and Operation 5-20

BLANK

Heating, Ventilation, and Air Conditioning

Description and Operation

Heating and Air Conditioning System Description and Operation

Engine Coolant

Engine coolant is the key element of the heating system. The engine thermostat controls the normal engine operating coolant temperature. Coolant pumped out of the engine enters the heater core through the inlet heater hose. The air flowing through the HVAC module absorbs the heat of the coolant flowing through the heater core. The coolant then exits the heater core through the heater outlet hose and returns back to the engine block.

Auxiliary Electric Heater

Vehicles equipped with a diesel engine come with an auxiliary electric heater. This 12V electrically powered heating element is positioned directly behind the regular coolant flow based heater core in the HVAC case. All airflow goes through the regular heater core first, and then through the auxiliary electric heater. The auxiliary electric heater is active when the outside ambient temperature is below **8°C (46°F)** , the coolant temperature is below **75°C (167°F)** , and the temperature air mix door is near the full hot position.

A/C Cycle

Refrigerant is the key element in an air conditioning system. R-134a is a very low temperature gases that can transfer the undesirable heat from the passenger compartment to the outside air.

The A/C compressor is belt driven and operates when the magnetic clutch is engaged. The compressor builds pressure in the A/C system. Compressing the refrigerant also adds heat to the refrigerant. The refrigerant is discharged from the compressor through the discharge hose, and forced to flow to the condenser and then through the balance of the A/C system. The A/C system is mechanically protected with the use of a high pressure relief valve. If the high pressure A/C switch were to fail or if the refrigerant system becomes restricted and refrigerant pressure continued to rise, the high pressure relief will pop open and release refrigerant from the system.

Compressed refrigerant enters the condenser in a high temperature, high pressure vapor state. As the refrigerant flows through the condenser, the heat of the refrigerant is transferred to the ambient air passing through the condenser. Cooling the refrigerant causes the refrigerant to condense and change from a vapor to a liquid state.

The condenser is located in front of the radiator for maximum heat transfer. The condenser is made of aluminum tubing and aluminum cooling fins, which allows rapid heat transfer for the refrigerant. The semi-cooled liquid refrigerant exits the condenser and flows through the liquid line, to the TXV.

The TXV is located at the evaporator inlet. The TXV is the dividing point for the high and the low pressure sides of the A/C system. As the refrigerant passes through the TXV, the refrigerant is lowered. Due to the pressure differential on the liquid refrigerant, the refrigerant will begin to boil at the TXV. The TXV also meters the amount of liquid refrigerant that can flow into the evaporator.

Refrigerant exiting the TXV flows into the evaporator core in a low pressure, liquid state. Ambient air is drawn through the HVAC module and passes through the evaporator core. Warm and moist air will cause the liquid refrigerant to boil inside the evaporator core.

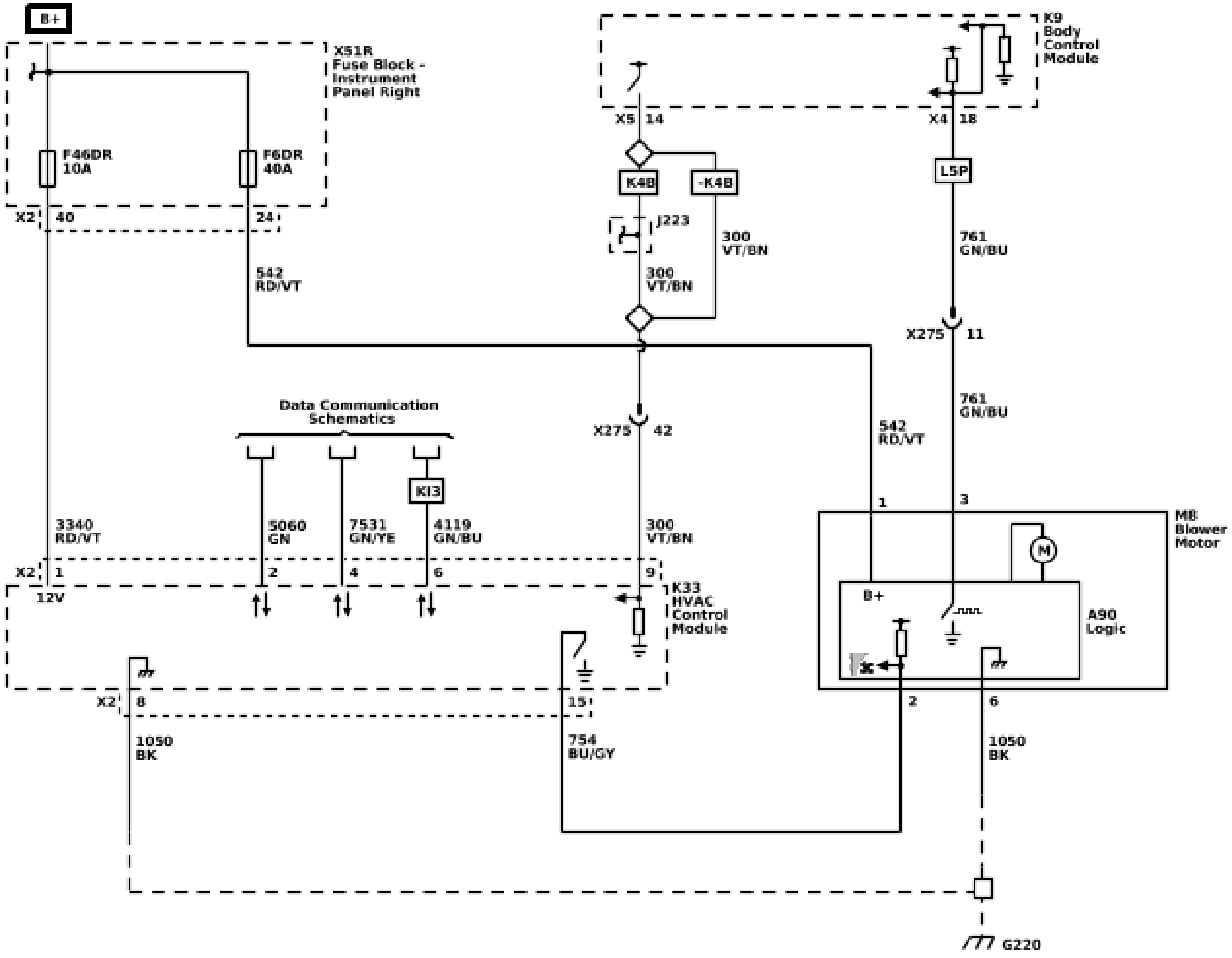
The boiling refrigerant absorbs heat from the ambient air and draws moisture onto the evaporator. The refrigerant exits the evaporator through the suction line and back to the compressor, in a vapor state. This completes the A/C cycle of heat removal. At the compressor, the refrigerant is compressed again and the cycle of heat removal is repeated.

The conditioned air is distributed through the HVAC module for passenger comfort. The moisture removed from the passenger compartment will also change form, or condense, and is discharged from the HVAC module as water.

HVAC - Automatic

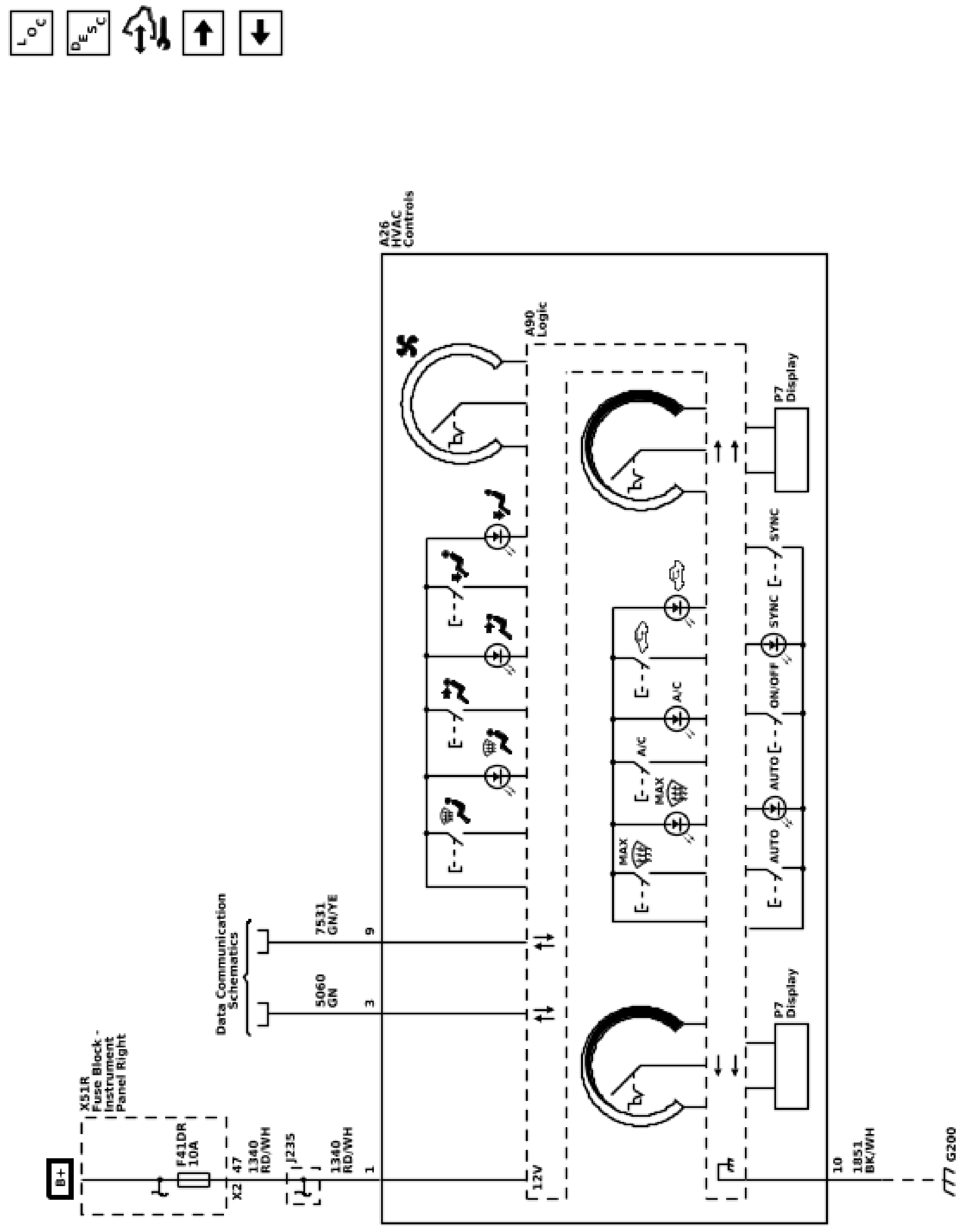
Schematic and Routing Diagrams

HVAC Schematics (HVAC Module Power, Ground, Serial Data, and Blower Motor)


B+
X51R
Fuse Block -
Instrument
Panel Right
F46DR
10A
F6DR
40A
X2
40
24
542
RD/VT
3340
RD/VT
K9
Body
Control
Module
X5
14
X4
18
K4B
-K4B
J223
300
VT/BN
L5P
761
GN/BU
X275
11
42
Data Communication
Schematics
KI3
5060
GN
7531
GN/YE
4119
GN/BU
1
2
4
6
9
12V
K33
HVAC
Control
Module
8
15
1050
BK
754
BU/GY
3
M8
Blower
Motor
M
B+
A90
Logic
G220

5995488

HVAC Schematics (HVAC Controls)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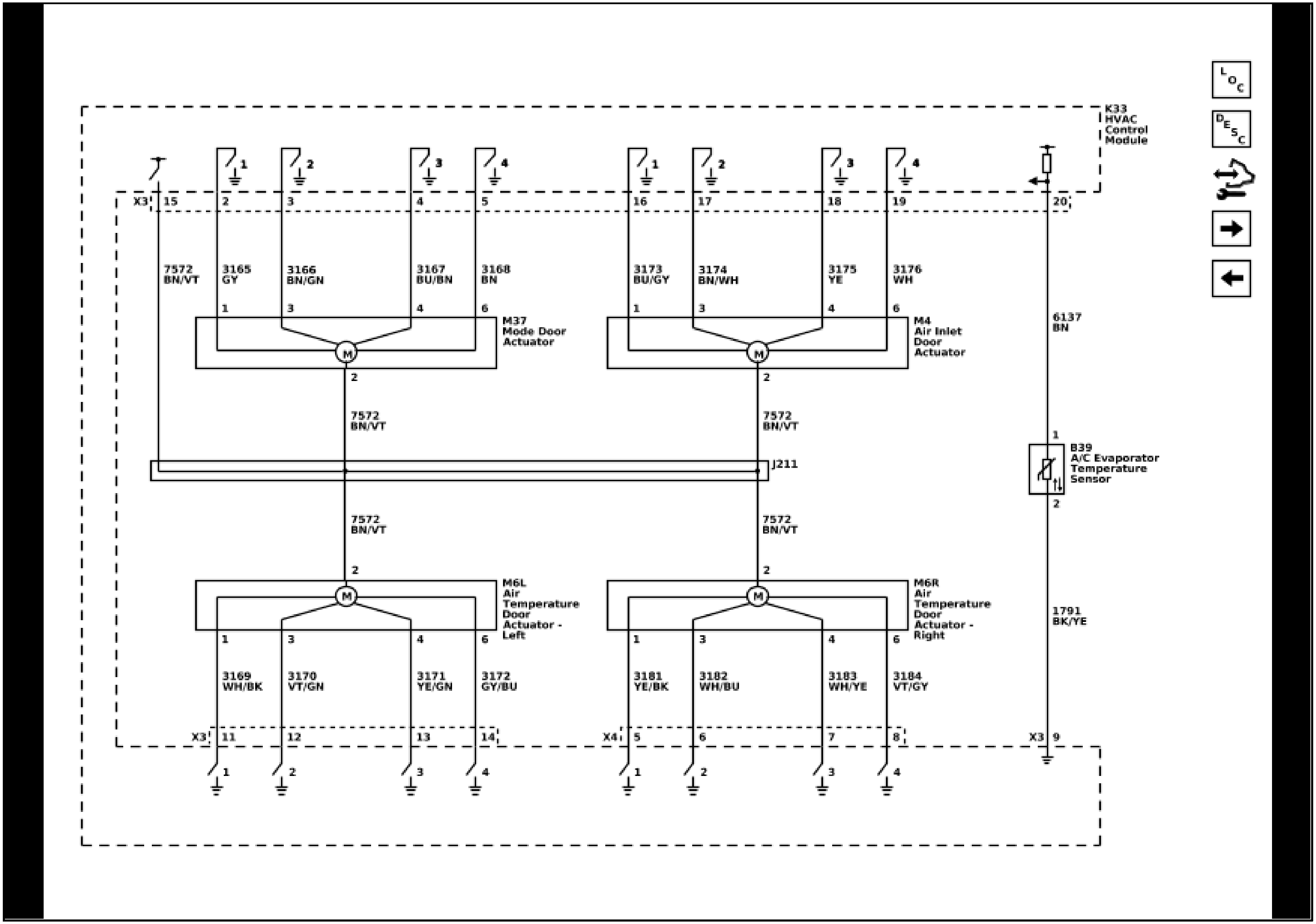
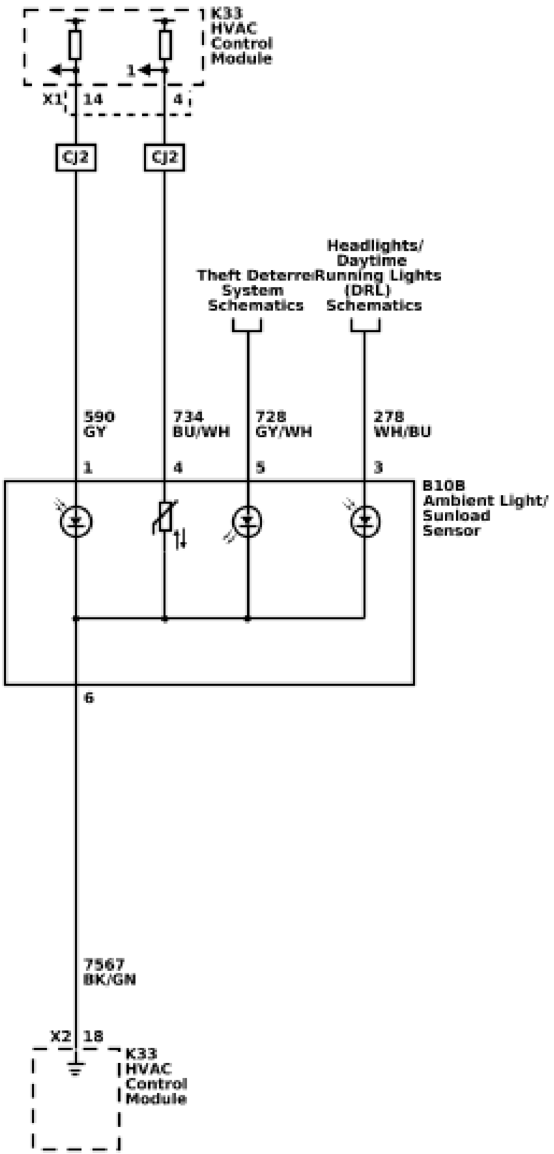
B+
X51R
Fuse Block -
Instrument
Panel Right
F41DR
10A
X2
47
1340
RD/WH
J235
1340
RD/WH
1
12V
Data Communication
Schematics
5060
GN
3
7531
GN/YE
9
A26
HVAC
Controls
A90
Logic
P7
Display
P7
Display
MAX
MAX
A/C
A/C
AUTO
AUTO
ON/OFF
SYNC
SYNC
10
1851
BK/WH
G200

HVAC Schematics (Temperature and Mode)

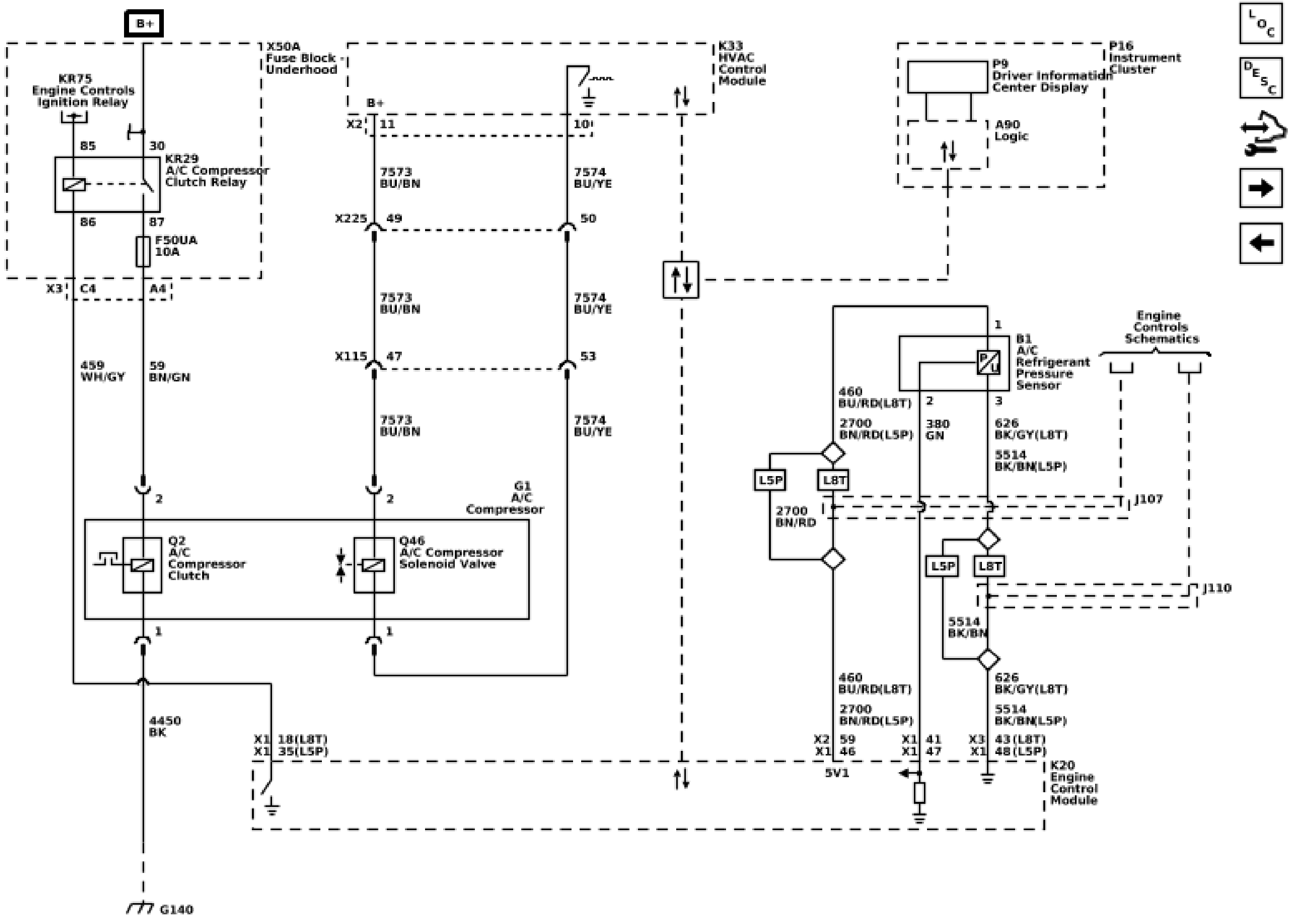

K33
HVAC
Control
Module
X3
15
2
3
4
5
16
17
18
19
20
1
2
3
4
7572
BN/VT
3165
GY
3166
BN/GN
3167
BU/BN
3168
BN
3173
BU/GY
3174
BN/WH
3175
YE
3176
WH
M37
Mode Door
Actuator
M4
Air Inlet
Door
Actuator
M
6137
BN
J211
B39
A/C Evaporator
Temperature
Sensor
M6L
Air
Temperature
Door
Actuator -
Left
M6R
Air
Temperature
Door
Actuator -
Right
1791
BK/YE
3169
WH/BK
3170
VT/GN
3171
YE/GN
3172
GY/BU
3181
YE/BK
3182
WH/BU
3183
WH/YE
3184
VT/GY
X3
11
12
13
14
X4
5
6
7
8
X3
9
5995490

HVAC Schematics (Sunload Sensor)


K33
HVAC
Control
Module
1
X1
14
4
CJ2
CJ2
Theft Deterre System Schematics
Headlights/ Daytime Running Lights (DRL) Schematics
590
GY
734
BU/WH
728
GY/WH
278
WH/BU
1
4
5
3
B108
Ambient Light/
Sunload
Sensor
6
7567
BK/GN
X2
18
K33
HVAC
Control
Module

5995491

HVAC Schematics (A/C Compressor Controls)


B+
X50A
Fuse Block - Underhood
KR75
Engine Controls Ignition Relay
85
30
KR29
A/C Compressor Clutch Relay
86
87
F50UA
10A
X3
C4
A4
459
WH/GY
59
BN/GN
K33
HVAC Control Module
B+
X2
11
10
7573
BU/BN
7574
BU/YE
X225
49
50
X115
47
53
G1
A/C Compressor
2
Q2
A/C Compressor Clutch
Q46
A/C Compressor Solenoid Valve
1
4450
BK
G140
X1 18(L8T)
X1 35(L5P)
P16
Instrument Cluster
P9
Driver Information Center Display
A90
Logic
B1
A/C Refrigerant Pressure Sensor
1
2
3
Engine Controls Schematics
460
BU/RD(L8T)
2700
BN/RD(L5P)
380
GN
626
BK/GY(L8T)
5514
BK/BN(L5P)
L5P
L8T
2700
BN/RD
J107
J110
5514
BK/BN
X2 59
X1 46
X1 41
X1 47
X3 43 (L8T)
X1 48 (L5P)
5V1
K20
Engine Control Module

5995492

Description and Operation

Automatic HVAC Description and Operation

The air temperature and the air delivery description and operation are divided into eight areas:

- HVAC Control Components
- Air Speed
- Air Delivery
- Heating and A/C Operation
- Recirculation Operation
- Automatic Operation
- Engine Coolant and A/C System Refrigerant

HVAC Control Components

HVAC Controls

The HVAC controls contains all switches, buttons, and dials which are required to control the functions of the HVAC system and serve as interface between the operator and the HVAC control module. The selected values are passed to the HVAC control module via LIN-Bus.

HVAC Control Module

The HVAC control module is a GMLAN device that interfaces between the operator and the HVAC system to maintain and control desired air temperature and air distribution settings. The battery positive voltage circuit provides power that the HVAC control module uses for keep alive memory. If the battery positive voltage circuit loses power, all HVAC DTCs and settings will be erased from keep alive memory. The body control module (BCM), which is the vehicle mode master, provides a device ON-Signal. The HVAC control module provides blower, air delivery mode and air temperature settings.

Actuators

Doors in the HVAC case assembly are used to control air flow. The HVAC control module operates the doors through the use of actuators, with one actuator being used for each door. The system has the following air control doors and associated actuators: mode, temperature, right temperature (CJ2), and recirculation.

Each actuator used in the system is a 5-wire stepper motor. The HVAC control module supplies a 12 V reference voltage to the stepper motor and energizes the 4 stepper motor coils with a pulsed ground signal. The stepper motor moves the associated air control door into the calculated position in order to reach the selected position. The null point of the stepper motor will be calibrated, if the stepper motor is new. When the stepper motor is calibrated, the HVAC control module can drive the applicable coil to reach exactly the desired position of the air control door.

Blower Motor and Control Module

The blower motor control module varies the speed of the blower motor by varying the voltage to the motor. A battery voltage circuit, ground circuit, and speed request signal circuit from the HVAC control module allow the blower motor control module to operate. The HVAC control module provides a low side pulse width modulation (PWM) signal to the blower motor control module to request a specific motor speed. The blower motor control module translates the PWM signal and drives the motor accordingly.

The blower motor control module has a signal wire used to output a speed signal. The signal is monitored by the BCM, and the value is sent to the ECM via serial data. The ECM monitors the blower motor speed to modify the total commanded engine coolant flow rate, which is a percentage of available coolant flow sent to the heater core for occupant comfort and windshield defrosting. When the HVAC Blower Speed is determined to be zero, the ECM disables the heater core coolant flow to optimize engine coolant flow for fuel economy and emissions.

Duct Air Temperature

Physical air temperature sensors are not used with the system

The temperature in the air distribution ducts is calculated based on information received from the sensors in the system. The HVAC control module uses the calculated temperatures in determining actuator position.

Evaporator Temperature Sensor

The evaporator temperature sensor is a 2-wire negative temperature coefficient thermistor. The sensor operates within a temperature range of −40 to +85°C (−40 to +185°F). The sensor is installed near the evaporator core to measure the air temperature exiting the core.

Based on vehicle operating conditions and operator settings, the HVAC software algorithms will determine a target evaporator air temperature. The operation of the compressor solenoid will be adjusted as needed to quickly reach and maintain the targeted temperature.

A/C Refrigerant Pressure Sensor

The A/C refrigerant pressure sensor is a 3-wire piezoelectric pressure transducer. A 5 V reference voltage, low reference, and signal circuits enable the sensor to operate. The A/C pressure signal can be between 0.2–4.8 V. When the A/C refrigerant pressure is low, the signal value is near 0 V. When the A/C refrigerant pressure is high, the signal value is near 5 V. The engine control module (ECM) converts the voltage signal to a pressure value. When pressure is too high or too low, the ECM will not allow the A/C compressor clutch to engage.

A/C Compressor

The A/C compressor uses a conventional belt driven magnetic clutch to engage and mechanically turn the compressor. When the A/C switch is pressed, the HVAC control module sends an A/C request message to the ECM via serial data. If specific criteria is met, the ECM then grounds the A/C compressor clutch relay control circuit, which will switch the A/C compressor clutch relay. With the relay contacts closed, battery voltage is supplied to the permanently grounded A/C compressor clutch. The A/C compressor clutch will then be activated.

This A/C system utilizes a variable displacement solenoid valve to alter the amount of displacement created by the turning of the compressor. The HVAC control module provides both battery voltage and a pulse width modulated ground to the variable displacement solenoid valve. When the A/C switch is pressed, the HVAC control module grounds the variable displacement solenoid using a (PWM) signal in order to determine the amount of compressor displacement. The performance of the A/C compressor is regulated based on cooling load.

Ambient Light/Sunload Sensor

The sunload sensor is connected to ground and to a 12 V clocked power supply through the HVAC control module. This clocked power supply is to power the sensor electronics and to work as a clock generator to the sunload sensor micro controller. The sensor uses a pulse signal for data identification and transferring the sun intensity measurement. At each positive transition from the clocked supply input, the sunload sensor micro controller will shift channels enabling new intensity measurement on the signal output to the HVAC control module. The signal voltage varies between 0–4 V.

The passenger compartment temperature sensor is a negative temperature co-efficient thermistor. A signal and low reference circuit enables the sensor to operate. As the air temperature increases, the sensor resistance decreases. The sensor signal varies between 0–5 V.

Bright or high intensity light causes the vehicles interior temperature to increase. The HVAC system compensates for the increased temperature by diverting additional cool air into the vehicle.

Windshield Temperature and Inside Moisture Sensor

The windshield temperature and inside moisture sensor includes the relative humidity sensor, windshield temperature sensor and humidity sensing element temperature sensor all in one assembly.

This sensor assembly provides information about:

- Relative humidity level at the windshield inside the vehicle
- Temperature of the windshield inside the vehicle
- Temperature of the humidity sensor element

Air Speed

The blower control switch is part of the HVAC controls. The selected value of the blower switch position is sent to the HVAC control module via LIN-Bus. The HVAC control module provides a low side pulse width modulation (PWM) signal to the blower motor control module to request a specific motor speed. The blower motor translates the PWM signal and drives the motor accordingly.

Afterblow

Afterblow is a feature that dries the evaporator core by operating the blower motor after the engine is turned OFF under certain conditions. This reduces the amount of microbial growth that can create undesirable odors. For additional information on afterblow, the default setting, and changing the setting, refer to Afterblow Configuration.

Air Delivery

The HVAC control module controls the distribution of air by the use of recirculation and mode door actuator. The modes that may be selected are:

- Defrost
- Defog
- Panel
- Floor

The desired air distribution mode can be selected with the air distribution switches at the HVAC control. The HVAC control delivers the values to the HVAC control module via LIN-Bus. The HVAC control module controls the mode door actuator so that it drives the door to the calculated position. Depending on the position of the door, air is distributed through various ducts leading to the outlets in the dash. Turning the mode door to the defrost position, the HVAC control module will move the recirculation actuator to outside air, reducing window fogging. When defrost is selected, the blower motor will be activated, regardless of the coolant temperature. The HVAC control module enables a high volume of air delivered to the front defrost vents. A/C is available in all modes.

The rear window defogger does not affect the HVAC system.

Heating and A/C Operation

The purpose of the heating and A/C system is to provide heated and cooled air to the interior of the vehicle. The A/C system will also remove humidity from the interior and reduce windshield fogging. Regardless of the temperature setting, the following can affect the rate that the HVAC system can achieve the desired temperature:

- Recirculation actuator setting
- Difference between inside and desired temperature
- Blower motor speed setting
- Mode setting

When the A/C switch is pressed, the HVAC controls sends a signal to the HVAC control module via LIN-Bus. The HVAC control module evaluates this signal and sends an A/C request signal to the ECM via CAN-Bus. The ECM checks all preconditions before releasing and if all conditions are met sends a release signal back to the HVAC control module. The ECM will provide a ground for the A/C compressor relay enabling it to close its internal contacts to send battery voltage to the A/C compressor clutch coil. The A/C compressor clutch will be activated. The performance of the A/C compressor is regulated via a variable A/C compressor solenoid valve. The HVAC control module supplies battery voltage to the A/C compressor. When the A/C switch is pressed, the HVAC control module provides a pulse width modulation (PWM) signal to the A/C compressor solenoid valve in order to command the performance of the A/C compressor.

The following conditions must be met in order to activate the A/C compressor:

- Battery voltage is between 9–18 V
- Engine coolant temperature is less than 124°C (255°F)

- Engine speed is greater than 600 RPM
- Engine speed is less than 5 500 RPM
- A/C high side pressure is between 269–2 929 kPa (39–425 PSI)
- Throttle position is less than 100%
- Evaporator temperature is greater than 3°C (38°F)
- ECM does not detect immoderate torque load
- ECM does not detect insufficient idle quality
- The ambient temperature is above 1°C (34°F)

The sensor information is used by the ECM to determine the following:

- The A/C high side pressure
- An A/C system load on the engine
- An immoderate A/C high side pressure
- The heat load at the A/C condenser

The air streams into the passenger compartment through the heater core and the evaporator core. The air temperature actuator drives the mixed air door to direct the airflow. If the interior temperature should be increased, the mixed air door is put into the position in which more air streams through the heater core. If the interior temperature should be decreased, the mixed air door is put into the position in which more air streams through the evaporator core.

Recirculation Operation

The recirculation switch is integrated into the HVAC control. The selected recirculation setting is sent to the HVAC control module via LIN-Bus. The HVAC control module controls the air intake using the recirculation actuator. In recirculation mode the recirculation door is positioned to block outside air from entering and circulate the air within the vehicle. In outside air mode the recirculation door is positioned to route outside air into the vehicle.

Recirculation is available in vent and vent/floor mode.

In floor only mode, some airflow is directed to the defrosters. In defrost and floor only modes, the actuator positions the recirculation door so that outside air is circulated to reduce window fogging.

In automatic mode the values of the sensors are used as inputs for the HVAC control module to calculate the fog risk on passenger compartment side of the windshield. The A/C compressor and the defrost mode may activated to prevent or remove fog on the passenger compartment side of the windshield.

Automatic Operation

In automatic operation, the HVAC control module maintains the comfort level inside of the vehicle by controlling the A/C compressor clutch, the blower motor, the air temperature actuators, mode actuator and recirculation actuator.

To put the HVAC system in automatic mode, the following is required:

1. The auto switch must be activated.
2. The air temperature switch must not be in either the full hot or full cold position.

Once the desired temperature is reached, the blower motor, mode, recirculation and temperature actuators automatically adjust to maintain the temperature selected. The HVAC control module performs the following functions to maintain the desired air temperature:

- Monitors the following sensors:
  - Ambient air temperature sensor
  - Ambient light/sunload sensor
  - Windshield temperature and inside moisture sensor
- Regulate the blower motor speed
- Position the air temperature actuators
- Position the mode door actuator
- Position the recirculation actuator
- Request A/C operation
- Control of the A/C compressor

When the warmest position is selected in automatic operation the blower speed will increase gradually until the vehicle reaches normal operating temperature. When normal operating temperature is reached the blower stays on high speed and the air temperature actuators stays in the full heat position.

When the coldest position is selected in automatic operation the blower stays on high and the air temperature actuators stay in full cold position. The mode actuator remains in the panel position and the recirculation actuator will remain in the recirculation position.

Under cold ambient temperatures, the automatic HVAC system provides heat in the most efficient manner. The operator can select an extreme temperature setting but the system will not warm the vehicle any faster. Under warm ambient temperatures, the automatic HVAC system also provides air conditioning in the most efficient manner. Selecting an extreme cool temperature will not cool the vehicle any faster.

Auxiliary Heater Coolant Pump

The primary purpose of the auxiliary coolant pump is to circulate engine coolant through the HVAC heater core when heat is required in the cabin for comfort. This normally happens when the vehicle is in an Auto Stop and the mechanical pump is not operating. If conditions exist that require coolant circulation to maintain cabin temperature, the engine control module will turn the pump ON. The engine control module controls the auxiliary coolant pump relay via the relay control circuit. The heater core coolant pump relay supplies voltage to the auxiliary coolant pump.

Electric Auxiliary Heater (C32)

Some models are equipped with an auxiliary electric heater to assist in warming the passenger compartment when the engine coolant has not sufficiently warmed to operating temperature. The heater is a 12 V positive temperature coefficient heating element located in the HVAC case just downstream of the traditional heater core. The HVAC control module will activate it when the outside temperature is less than approximately 8°C (46°F), the engine coolant temperature is less than approximately 75°C (167°F), and the temperature blend door is commanded to the full hot position.

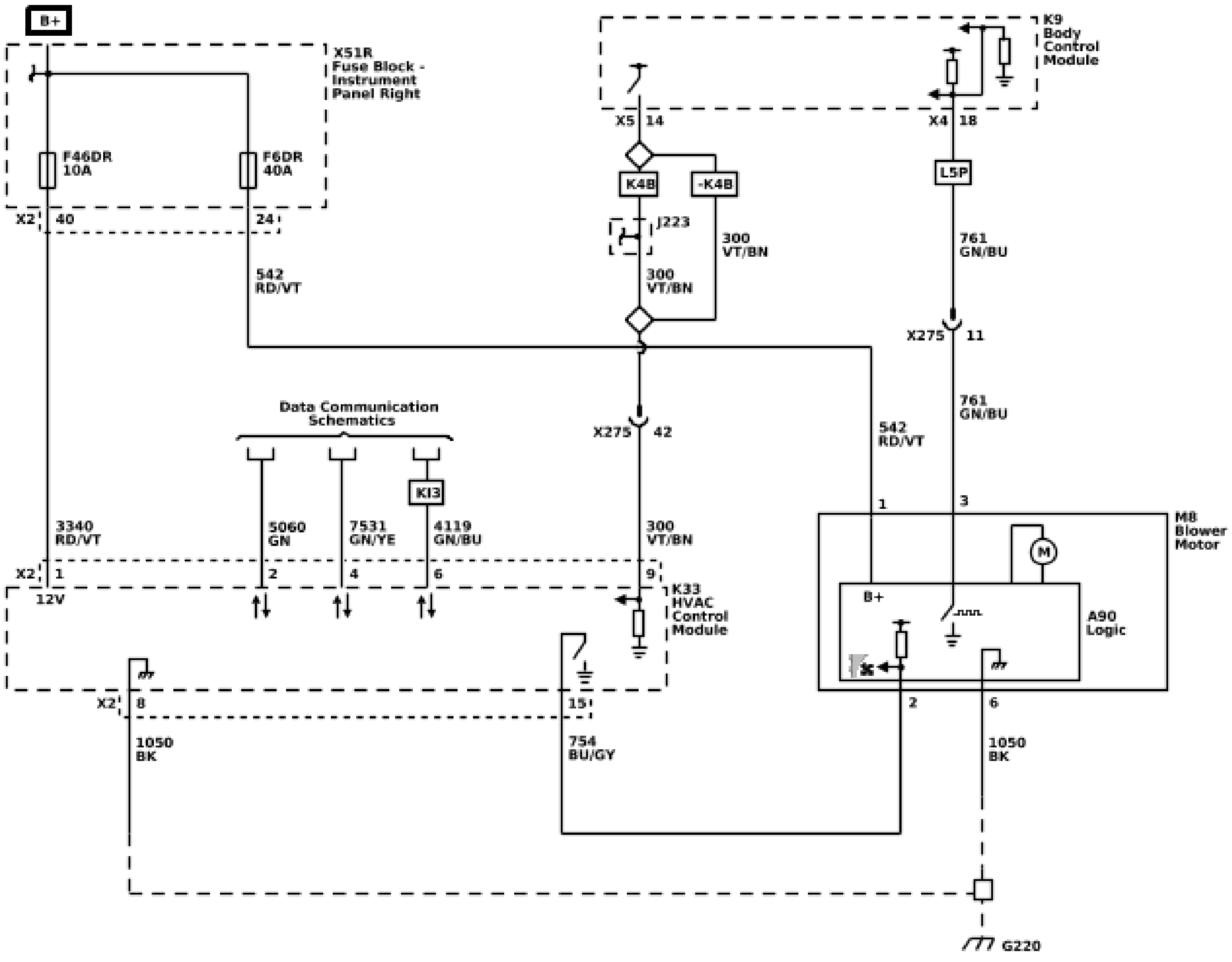
Engine Coolant and A/C System Refrigerant

For information on engine coolant, coolant flow, A/C refrigerant, and the A/C refrigerant cycle, refer to *Heating and Air Conditioning System Description and Operation on page 5-3*.

HVAC - Manual

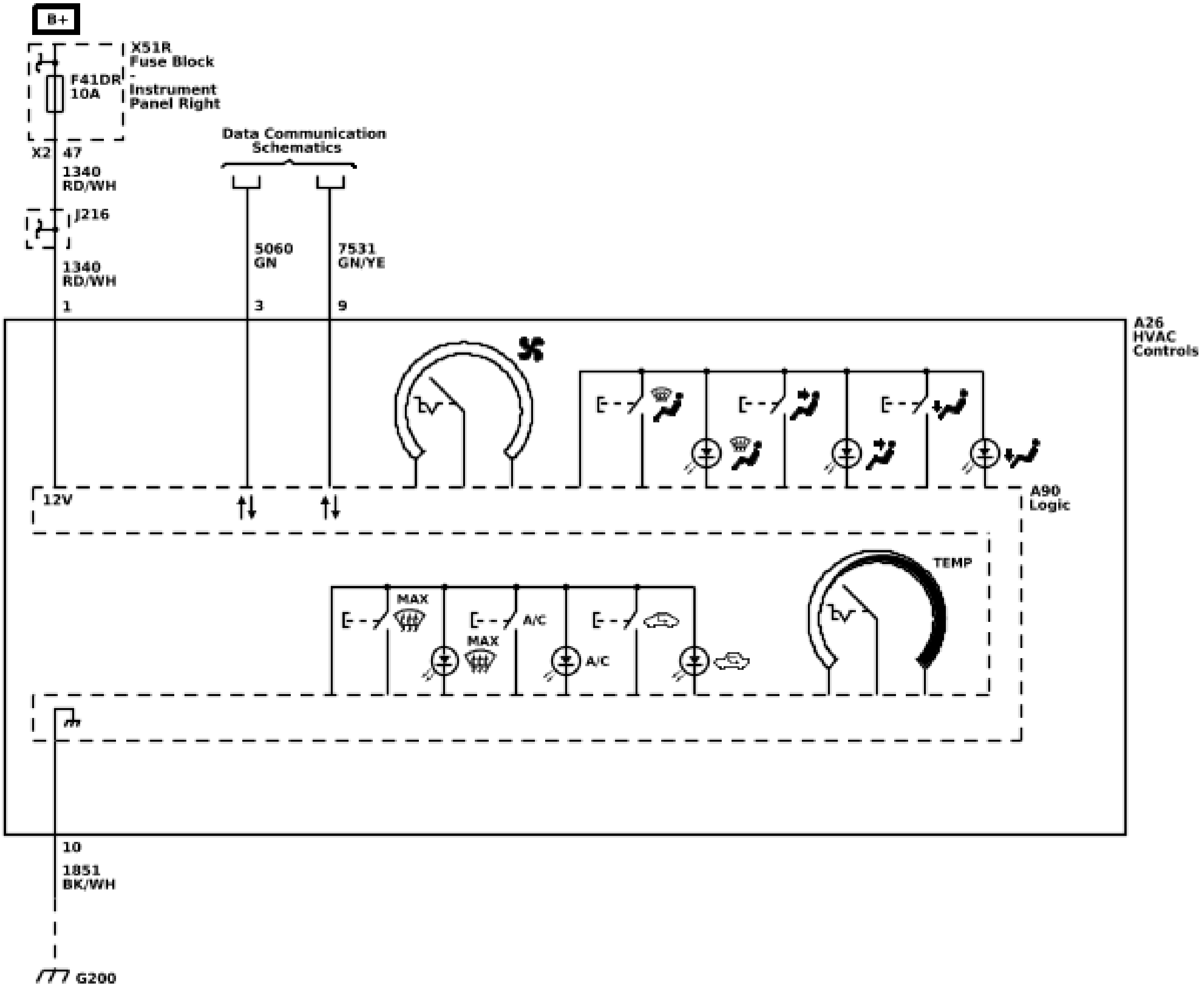
Schematic and Routing Diagrams

HVAC Schematics (HVAC Module Power, Ground, Serial Data, and Blower Motor)


B+
X51R
Fuse Block - Instrument Panel Right
F46DR
10A
F6DR
40A
X2
40
24
542
RD/VT
3340
RD/VT
Data Communication Schematics
KI3
5060
GN
7531
GN/YE
4119
GN/BU
X2
1
12V
2
4
6
9
K33
HVAC
Control
Module
X2
8
15
1050
BK
754
BU/GY
K9
Body
Control
Module
X5
14
X4
18
K4B
-K4B
L5P
J223
300
VT/BN
300
VT/BN
761
GN/BU
X275
11
X275
42
761
GN/BU
542
RD/VT
300
VT/BN
1
3
M8
Blower
Motor
M
B+
A90
Logic
2
6
1050
BK
G220

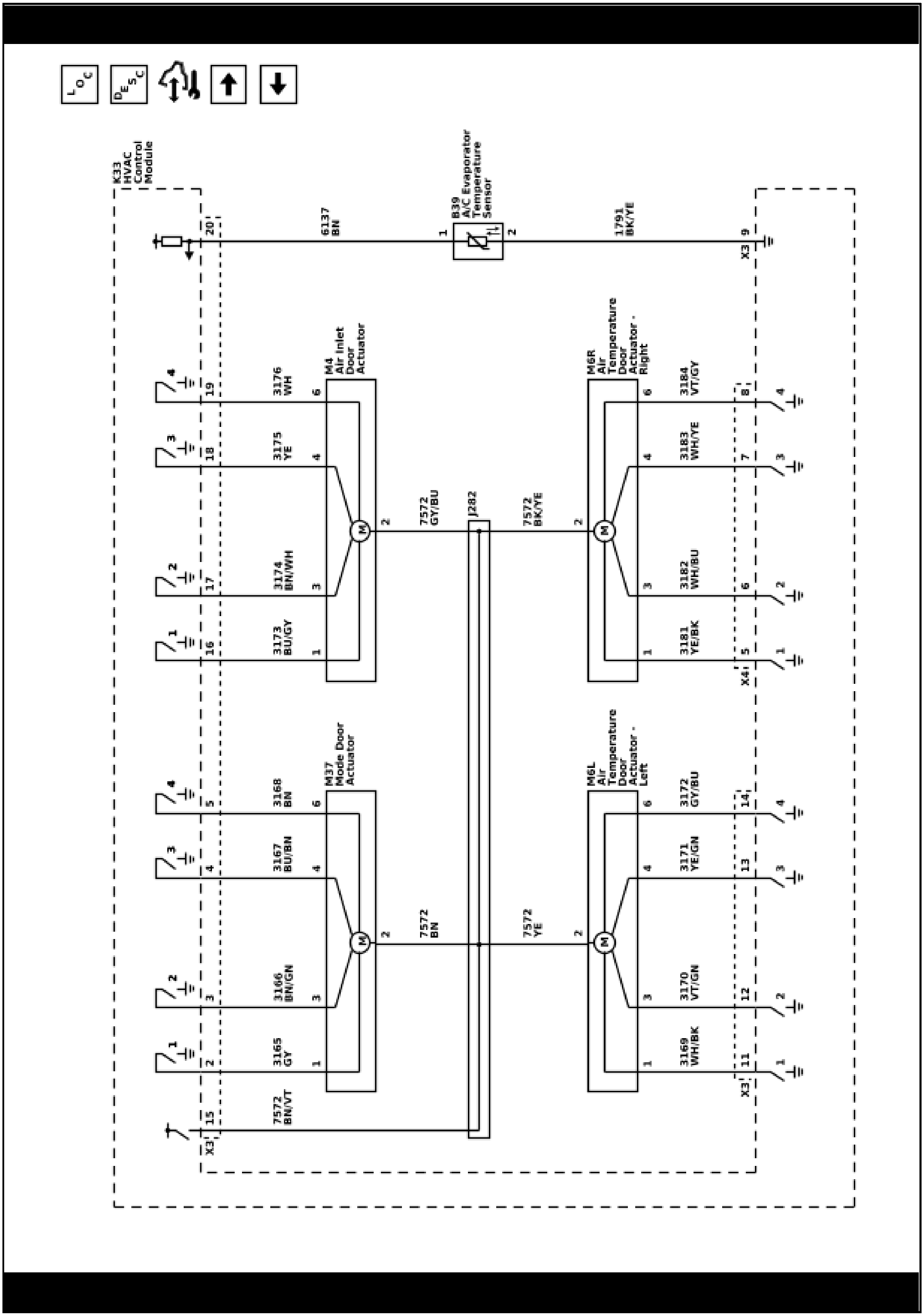
5995493

HVAC Schematics (HVAC Controls)


B+
X51R
Fuse Block
-
Instrument
Panel Right
F41DR
10A
X2
47
1340
RD/WH
J216
1340
RD/WH
1
Data Communication
Schematics
5060
GN
3
7531
GN/YE
9
A26
HVAC
Controls
12V
A90
Logic
MAX
MAX
A/C
A/C
TEMP
10
1851
BK/WH
G200

5995494

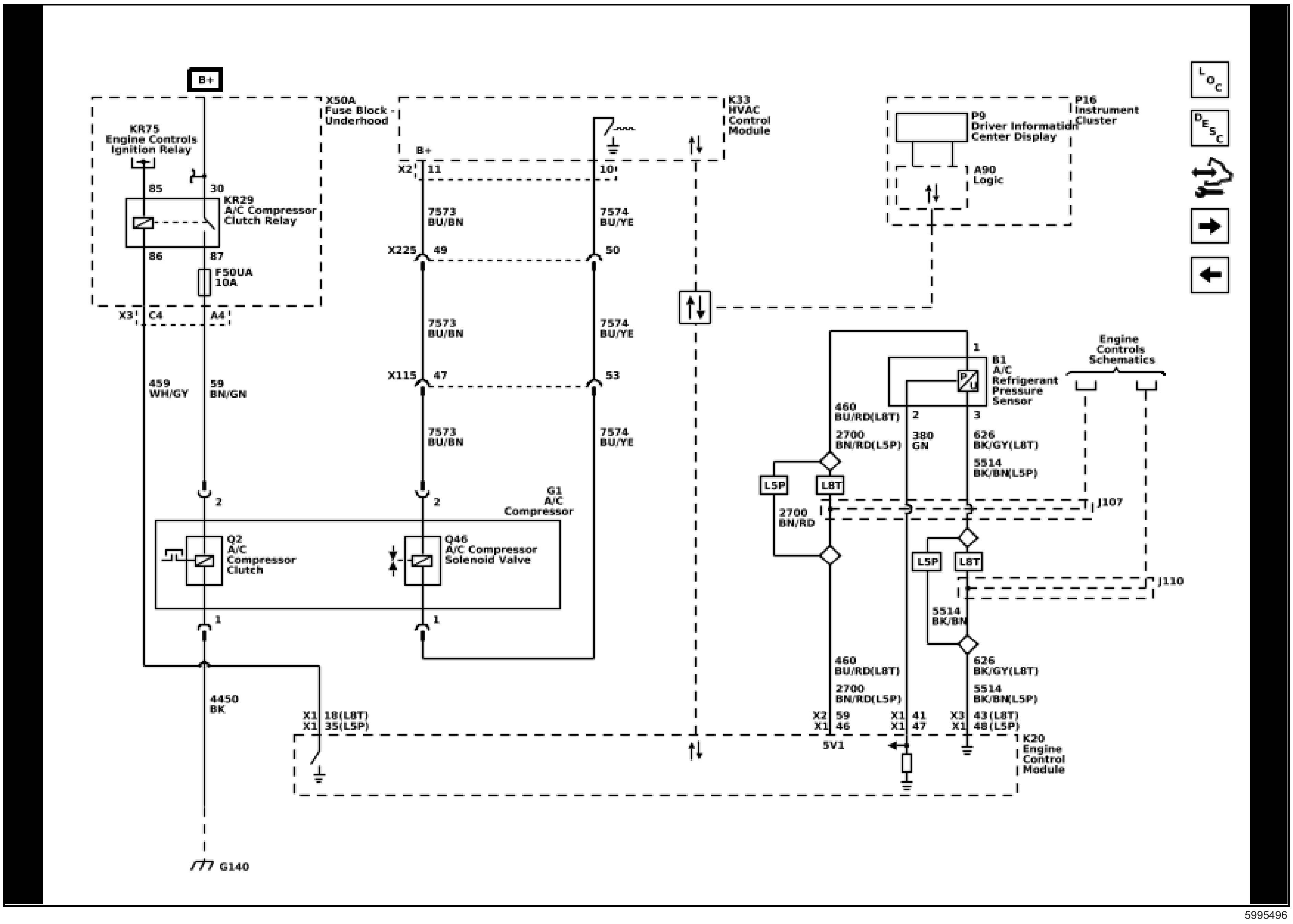
HVAC Schematics (Temperature and Mode)



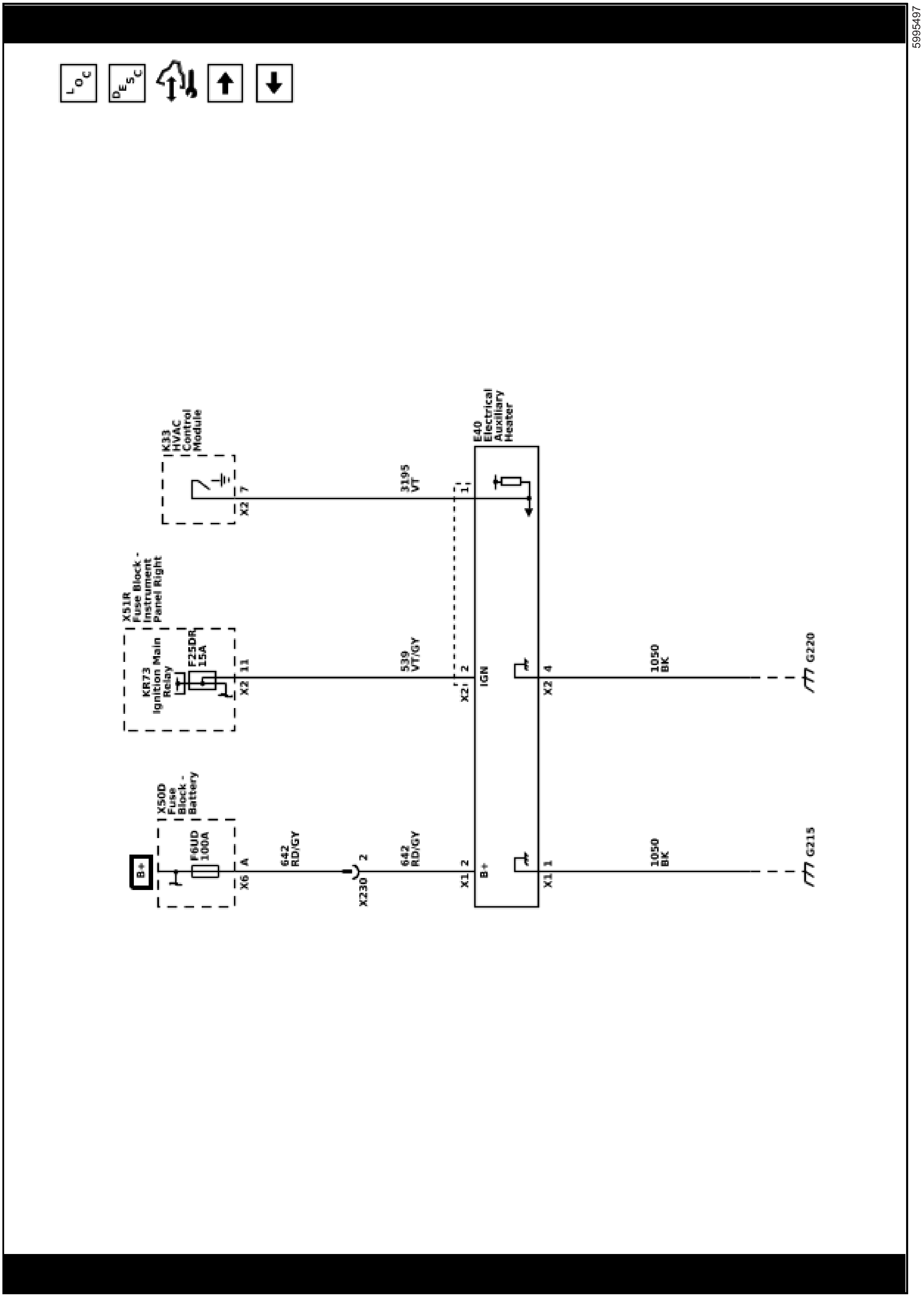
K33 HVAC Control Module
20
6137 BN
1
B39 A/C Evaporator Temperature Sensor
2
1791 BK/YE
X3 9
19
3176 WH
6
M4 Air Inlet Door Actuator
18
3175 YE
4
2
7572 GY/BU
J282
7572 BK/YE
2
17
3174 BN/WH
3
16
3173 BU/GY
1
M6R Air Temperature Door Actuator - Right
6
3184 VT/GY
8
4
3183 WH/YE
7
3
3182 WH/BU
6
1
3181 YE/BK
5
X4
5
3168 BN
M37 Mode Door Actuator
4
3167 BU/BN
2
7572 BN
7572 YE
3
3166 BN/GN
2
3165 GY
15
7572 BN/VT
X3
M6L Air Temperature Door Actuator - Left
3172 GY/BU
14
3171 YE/GN
13
3170 VT/GN
12
3169 WH/BK
11
X3
M

5995495

HVAC Schematics (A/C Compressor Controls)


B+
X50A Fuse Block - Underhood
KR75 Engine Controls Ignition Relay
85
86
30
87
KR29 A/C Compressor Clutch Relay
F50UA 10A
X3 C4
A4
459 WH/GY
59 BN/GN
K33 HVAC Control Module
B+
X2 11
10
7573 BU/BN
7574 BU/YE
X225 49
50
X115 47
53
G1 A/C Compressor
2
Q2 A/C Compressor Clutch
Q46 A/C Compressor Solenoid Valve
1
4450 BK
G140
X1 18(L8T)
X1 35(L5P)
P16 Instrument Cluster
P9 Driver Information Center Display
A90 Logic
Engine Controls Schematics
B1 A/C Refrigerant Pressure Sensor
3
460 BU/RD(L8T)
2700 BN/RD(L5P)
380 GN
626 BK/GY(L8T)
5514 BK/BN(L5P)
L5P
L8T
2700 BN/RD
5514 BK/BN
J107
J110
X2 59
X1 46
X1 41
X1 47
X3 43(L8T)
X1 48(L5P)
5V1
K20 Engine Control Module
5995496

HVAC Schematics (Auxiliary Heater (C32))


5995497
B+
X50D Fuse Block - Battery
F6UD 100A
X6 A
642 RD/GY
X230 2
642 RD/GY
X1 2
B+
X1 1
1050 BK
G215
X51R Fuse Block - Instrument Panel Right
KR73 Ignition Main Relay
F25DR 15A
X2 11
539 VT/GY
X2 2
IGN
X2 4
1050 BK
G220
K33 HVAC Control Module
X2 7
3195 VT
1
E40 Electrical Auxiliary Heater

Description and Operation

Manual HVAC Description and Operation

The air temperature and the air delivery description and operation are divided into seven areas:

- HVAC Control Components
- Air Speed
- Air Delivery
- Heating and A/C Operation
- Recirculation Operation
- Engine Coolant and A/C System Refrigerant

HVAC Control Components

HVAC Controls

The HVAC controls contains all switches, buttons, and dials which are required to control the functions of the HVAC system and serve as interface between the operator and the HVAC control module. The selected values are passed to the HVAC control module via LIN-Bus.

HVAC Control Module

The HVAC control module is a GMLAN device that interfaces between the operator and the HVAC system to maintain and control desired air temperature and air distribution settings. The battery positive voltage circuit provides power that the HVAC control module uses for keep alive memory. If the battery positive voltage circuit loses power, all HVAC DTCs and settings will be erased from keep alive memory. The body control module (BCM), which is the vehicle mode master, provides a device ON-Signal. The HVAC control module provides blower, air delivery mode and air temperature settings.

Actuators

Doors in the HVAC case assembly are used to control air flow. The HVAC control module operates the doors through the use of actuators, with one actuator being used for each door. The system has the following air control doors and associated actuators: mode, temperature, and recirculation.

Each actuator used in the system is a 5-wire stepper motor. The HVAC control module supplies a 12 V reference voltage to the stepper motor and energizes the 4 stepper motor coils with a pulsed ground signal. The stepper motor moves the associated air control door into the calculated position in order to reach the selected position. The null point of the stepper motor will be calibrated, if the stepper motor is new. When the stepper motor is calibrated, the HVAC control module can drive the applicable coil to reach exactly the desired position of the air control door.

Blower Motor and Control Module

The blower motor control module varies the speed of the blower motor by varying the voltage to the motor. A battery voltage circuit, ground circuit, and speed request signal circuit from the HVAC control module allow the blower motor control module to operate. The HVAC control module provides a low side pulse width modulation (PWM) signal to the blower motor control module to request a specific motor speed. The blower motor control module translates the PWM signal and drives the motor accordingly.

The blower motor control module has a signal wire used to output a speed signal. The signal is monitored by the BCM, and the value is sent to the ECM via serial data. The ECM monitors the blower motor speed to modify the total commanded engine coolant flow rate, which is a percentage of available coolant flow sent to the heater core for occupant comfort and windshield defrosting. When the HVAC Blower Speed is determined to be zero, the ECM disables the heater core coolant flow to optimize engine coolant flow for fuel economy and emissions.

Evaporator Temperature Sensor

The evaporator temperature sensor is a 2-wire negative temperature coefficient thermistor. The sensor operates within a temperature range of −40 to +85°C (−40 to +185°F). The sensor is installed near the evaporator core to measure the air temperature exiting the core.

Based on vehicle operating conditions and operator settings, the HVAC software algorithms will determine a target evaporator air temperature. The operation of the compressor solenoid will be adjusted as needed to quickly reach and maintain the targeted temperature.

A/C Refrigerant Pressure Sensor

The A/C refrigerant pressure sensor is a 3-wire piezoelectric pressure transducer. A 5 V reference voltage, low reference, and signal circuits enable the sensor to operate. The A/C pressure signal can be between 0.2–4.8 V. When the A/C refrigerant pressure is low, the signal value is near 0 V. When the A/C refrigerant pressure is high, the signal value is near 5 V. The engine control module (ECM) converts the voltage signal to a pressure value. When pressure is too high or too low, the ECM will not allow the A/C compressor clutch to engage.

A/C Compressor

The A/C compressor uses a conventional belt driven magnetic clutch to engage and mechanically turn the compressor. When the A/C switch is pressed, the HVAC control module sends an A/C request message to the ECM via serial data. If specific criteria is met, the ECM then grounds the A/C compressor clutch relay control circuit, which will switch the A/C compressor clutch relay. With the relay contacts closed, battery voltage is supplied to the permanently grounded A/C compressor clutch. The A/C compressor clutch will then be activated.

This A/C system utilizes a variable displacement solenoid valve to alter the amount of displacement created by the turning of the compressor. The HVAC control module provides both battery voltage and a pulse width modulated ground to the variable displacement solenoid valve. When the A/C switch is pressed, the HVAC control module grounds the variable displacement solenoid using a (PWM) signal in order to determine the amount of compressor displacement. The performance of the A/C compressor is regulated based on cooling load.

Air Speed

The blower control switch is part of the HVAC controls. The selected value of the blower switch position is sent to the HVAC control module via LIN-Bus. The HVAC control module provides a low side pulse width modulation (PWM) signal to the blower motor control module to request a specific motor speed. The blower motor translates the PWM signal and drives the motor accordingly.

Afterblow

Afterblow is a feature that dries the evaporator core by operating the blower motor after the engine is turned OFF under certain conditions. This reduces the amount of microbial growth that can create undesirable odors. For additional information on afterblow, the default setting, and changing the setting, refer to Afterblow Configuration.

Air Delivery

The HVAC control module controls the distribution of air by the use of recirculation and mode actuator. The modes that may be selected are:

- Defrost
- Defog
- Panel
- Floor

The desired air distribution mode can be selected with the air distribution switches at the HVAC controls. The HVAC controls delivers the values to the HVAC control module via LIN-Bus. The HVAC control module controls the air distribution actuator so that it drives the door to the calculated position. Depending on the position of the door, air is distributed through various ducts leading to the outlets in the dash. Turning the mode door to the defrost position, the HVAC control module will move the recirculation actuator to outside air, reducing window fogging. When defrost is selected, the blower motor will be activated, regardless of the coolant temperature. The HVAC control module enables a high volume of air delivered to the front defrost vents. A/C is available in all modes.

The rear window defogger does not affect the HVAC system.

Heating and A/C Operation

The purpose of the heating and A/C system is to provide heated and cooled air to the interior of the vehicle. The A/C system will also remove humidity from the interior and reduce windshield fogging. Regardless of the temperature setting, the following can affect the rate that the HVAC system can achieve the desired temperature:

- Recirculation actuator setting
- Difference between inside and desired temperature
- Blower motor speed setting
- Mode setting

When the A/C switch is pressed, the HVAC controls sends a signal to the HVAC control module via LIN-Bus. The HVAC control module evaluates this signal and sends an A/C request signal to the ECM via CAN-Bus. The ECM checks all preconditions before releasing and if all conditions are met sends a release signal back to the HVAC control module. The ECM will provide a ground for the A/C compressor relay enabling it to close its internal contacts to send battery voltage to the A/C compressor clutch coil. The A/C compressor clutch will be activated. The performance of the A/C compressor is regulated via a variable A/C compressor solenoid valve. The HVAC control module supplies battery voltage to the A/C compressor. When the A/C switch is pressed, the HVAC control module provides a pulse width modulation (PWM) signal to the A/C compressor solenoid valve in order to command the performance of the A/C compressor.

The following conditions must be met in order to activate the A/C compressor:

- Battery voltage is between 9–18 V
- Engine coolant temperature is less than 124°C (255°F)
- Engine speed is greater than 600 RPM
- Engine speed is less than 5 500 RPM
- A/C high side pressure is between 269–2 929 kPa (39–425 PSI)
- Throttle position is less than 100%
- Evaporator temperature is greater than 3°C (38°F)
- ECM does not detect immoderate torque load
- ECM does not detect insufficient idle quality
- The ambient temperature is above 1°C (34°F)

The sensor information is used by the ECM to determine the following:

- The A/C high side pressure
- An A/C system load on the engine
- An immoderate A/C high side pressure
- The heat load at the A/C condenser

The air streams into the passenger compartment through the heater core and the evaporator core. The air temperature actuator drives the mixed air door to induce the airflow. If the interior temperature should be increased, the mixed air door is put into the position in which more air streams through the heater core. If the interior temperature should be decreased, the mixed air door is put into the position in which more air streams through the evaporator core.

Recirculation Operation

The recirculation switch is integrated into the HVAC control. The selected recirculation setting is sent to the HVAC control module via LIN-Bus. The HVAC control module controls the air intake using the recirculation actuator. In recirculation mode the recirculation door is positioned to block outside air from entering and circulate the air within the vehicle. In outside air mode the recirculation door is positioned to route outside air into the vehicle.

Recirculation is available in vent and vent/floor mode.

In floor only mode, some airflow is directed to the defrosters. In defrost and floor only modes, the actuator positions the recirculation door so that outside air is circulated to reduce window fogging.

Electric Auxiliary Heater

Some models are equipped with an auxiliary electric heater to assist in warming the passenger compartment when the engine coolant has not sufficiently warmed to operating temperature. The heater is a 12 V positive temperature coefficient heating element located in the HVAC case just downstream of the traditional heater core. The HVAC control module will activate it when the outside temperature is less than approximately 8°C (46°F), the engine coolant temperature is less than approximately 75°C (167°F), and the temperature blend door is commanded to the full hot position.

Engine Coolant and A/C System Refrigerant

For information on engine coolant, coolant flow, A/C refrigerant, and the A/C refrigerant cycle, refer to *Heating and Air Conditioning System Description and Operation on page 5-3*.

Section 6

Power and Signal Distribution

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  Description and Operation 6-22
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  Schematic and Routing Diagrams 6-855
    Cigar Lighter/Power Outlet Schematics 6-856
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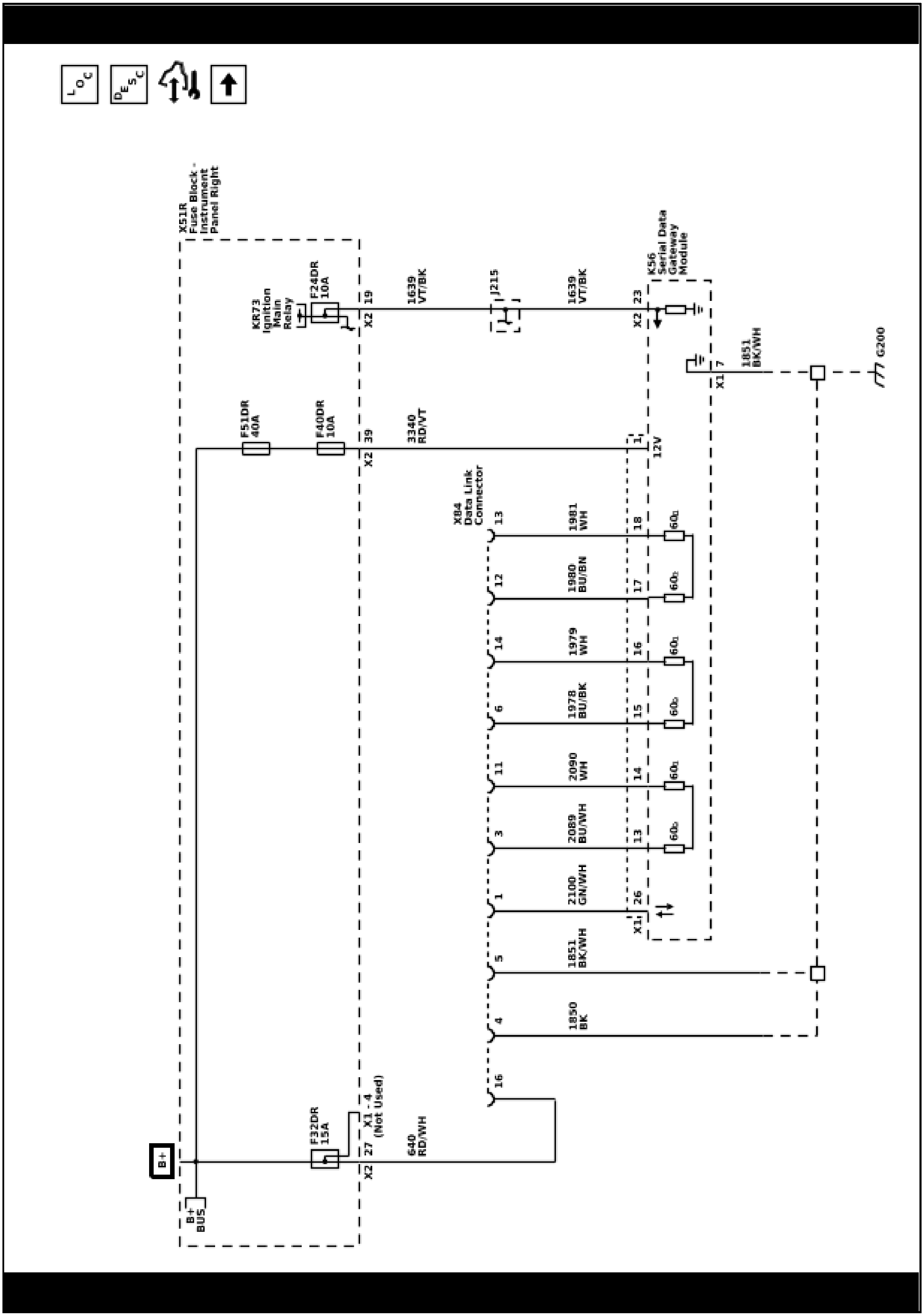
  Description and Operation 6-979
    Power Mode Description and Operation (Without BTM and/or ATH/ATS) 6-979
    Power Mode Description and Operation (BTM and/or ATH/ATS) 6-980
    Retained Accessory Power Description and Operation 6-983

BLANK

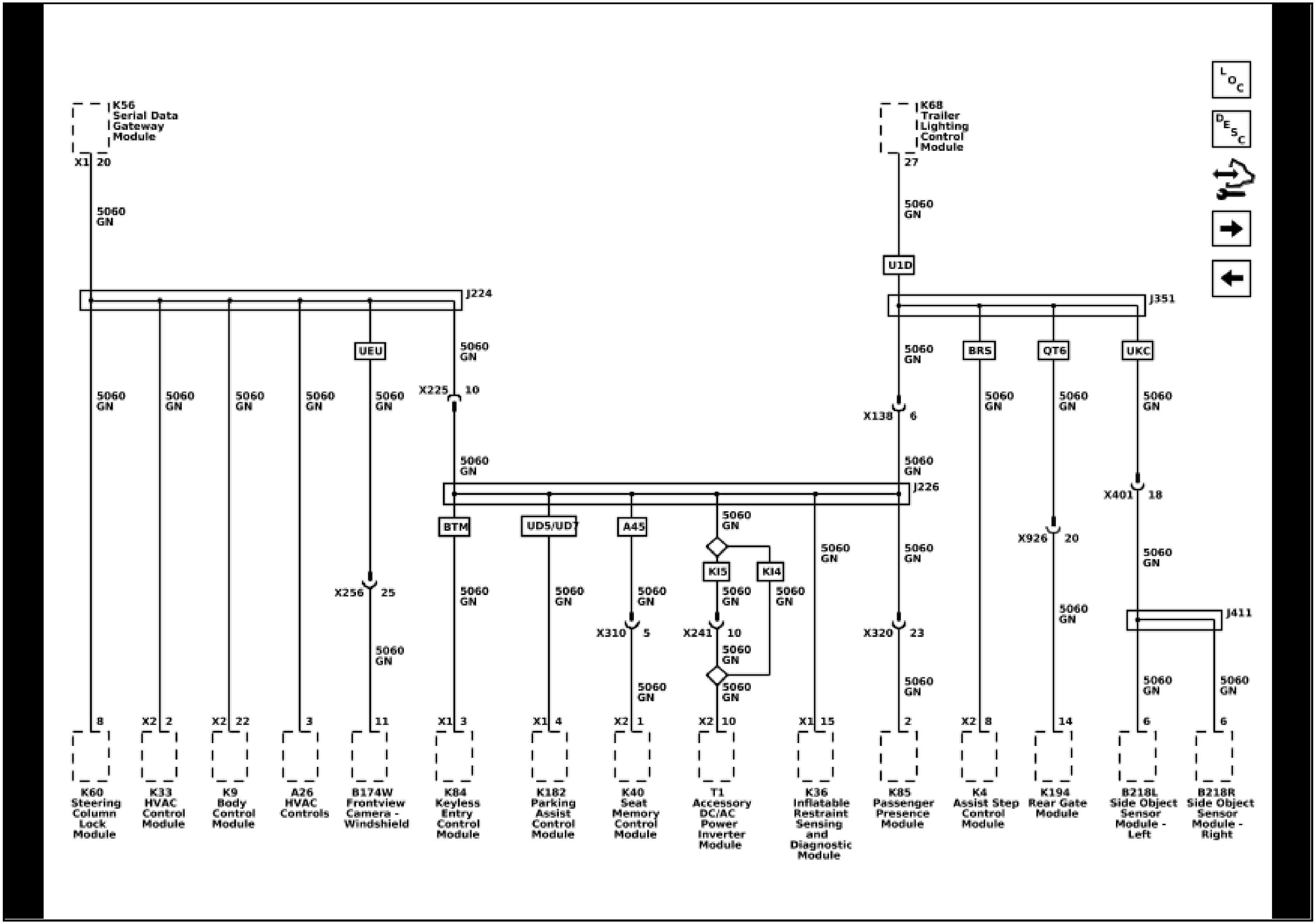
Data Communications

Schematic and Routing Diagrams

Data Communication Schematics (Data Link Connector and Serial Data Gateway Module Power and Ground)

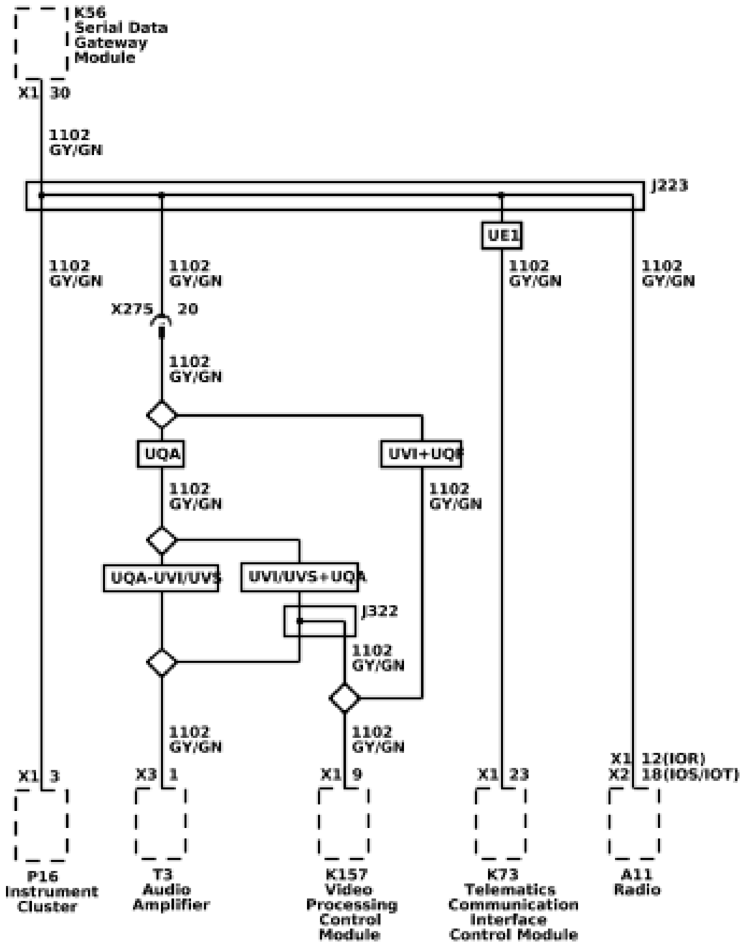

X51R
Fuse Block - Instrument Panel Right
KR73 Ignition Main Relay
F24DR 10A
X2 19
1639 VT/BK
J215
1639 VT/BK
X2 23
K56 Serial Data Gateway Module
X1 7
1851 BK/WH
G200
F51DR 40A
F40DR 10A
X2 39
3340 RD/VT
1
12V
X84 Data Link Connector
13
1981 WH
18
60Ω
12
1980 BU/BN
17
60Ω
14
1979 WH
16
60Ω
6
1978 BU/BK
15
60Ω
11
2090 WH
14
60Ω
3
2089 BU/WH
13
60Ω
1
2100 GN/WH
X1 26
5
1851 BK/WH
4
1850 BK
16
B+
B+ BUS
F32DR 15A
X2 27
X1 4 (Not Used)
640 RD/WH
5995498

Data Communication Schematics (Low Speed GMLAN)


K56 Serial Data Gateway Module
X1 20
K68 Trailer Lighting Control Module
27
5060 GN
U1D
J224
J351
J226
J411
UEU
BRS
QT6
UKC
BTM
UD5/UD7
A45
KI5
KI4
X225 10
X138 6
X401 18
X926 20
X256 25
X310 5
X241 10
X320 23
8
X2 2
X2 22
3
11
X1 3
X1 4
X2 1
X2 10
X1 15
2
X2 8
14
6
6
K60 Steering Column Lock Module
K33 HVAC Control Module
K9 Body Control Module
A26 HVAC Controls
B174W Frontview Camera - Windshield
K84 Keyless Entry Control Module
K182 Parking Assist Control Module
K40 Seat Memory Control Module
T1 Accessory DC/AC Power Inverter Module
K36 Inflatable Restraint Sensing and Diagnostic Module
K85 Passenger Presence Module
K4 Assist Step Control Module
K194 Rear Gate Module
B218L Side Object Sensor Module - Left
B218R Side Object Sensor Module - Right
LOC
DESC

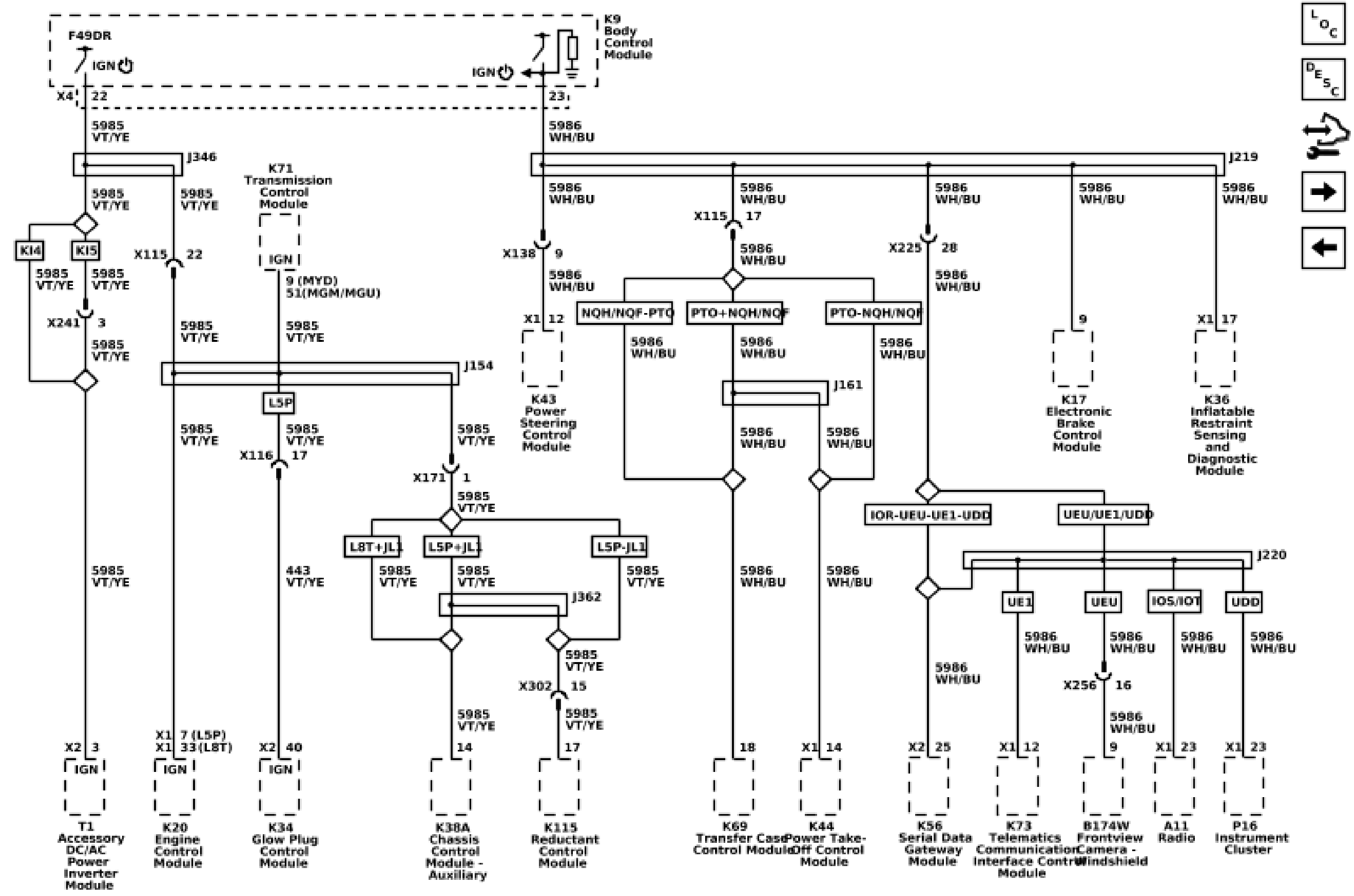
5995499

Data Communication Schematics (Gateway Isolated Low Speed GMLAN)

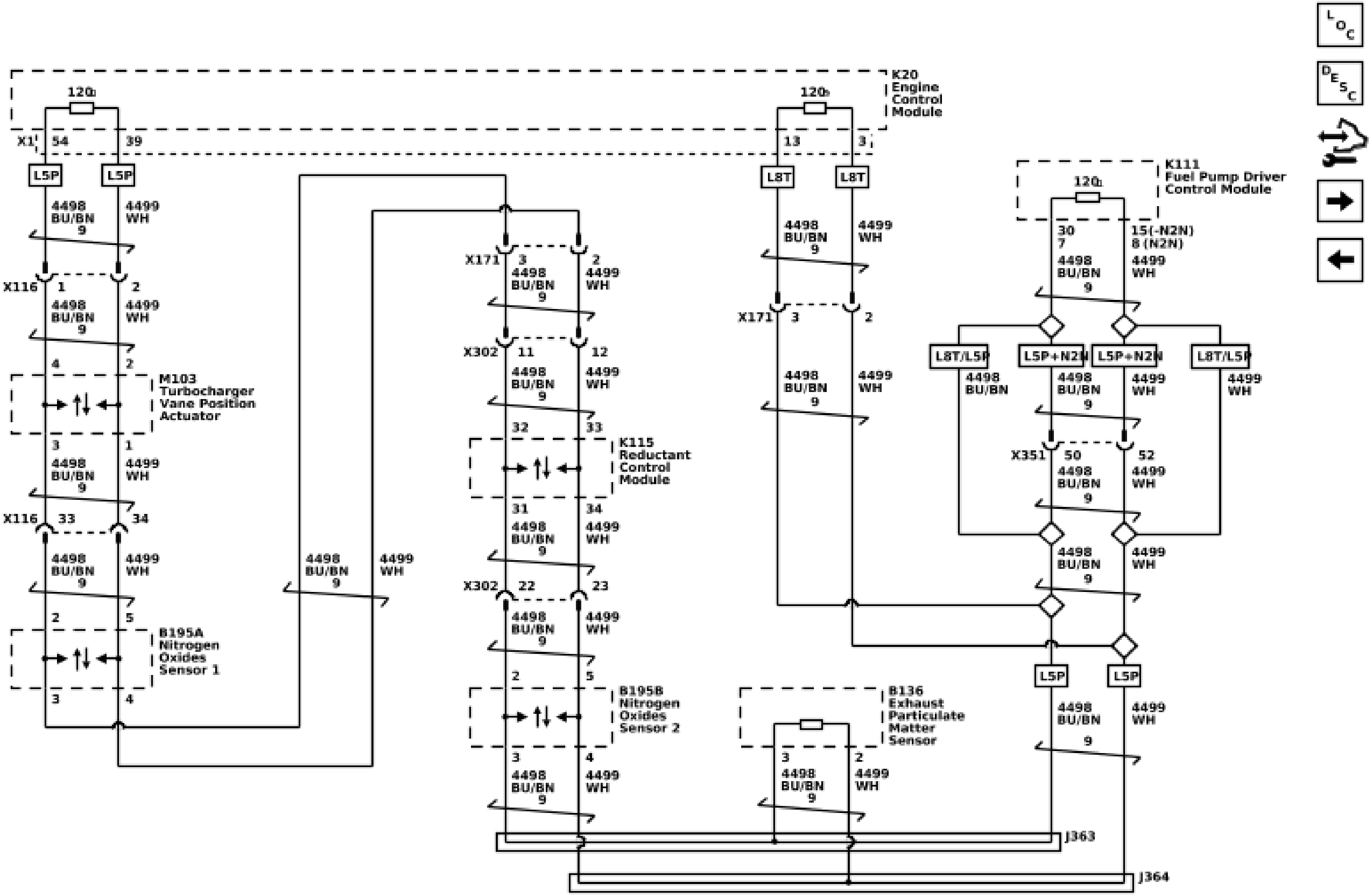

K56
Serial Data
Gateway
Module
X1 30
1102
GY/GN
J223
UE1
1102
GY/GN
1102
GY/GN
1102
GY/GN
1102
GY/GN
X275 20
1102
GY/GN
UQA
UVI+UQF
1102
GY/GN
1102
GY/GN
UQA-UVI/UVS
UVI/UVS+UQA
J322
1102
GY/GN
1102
GY/GN
1102
GY/GN
X1 3
X3 1
X1 9
X1 23
X1 12(IOR)
X2 18(IOS/IOT)
P16
Instrument
Cluster
T3
Audio
Amplifier
K157
Video
Processing
Control
Module
K73
Telematics
Communication
Interface
Control Module
A11
Radio

5995500

Data Communication Schematics (Communications Enable - High Speed GMLAN)

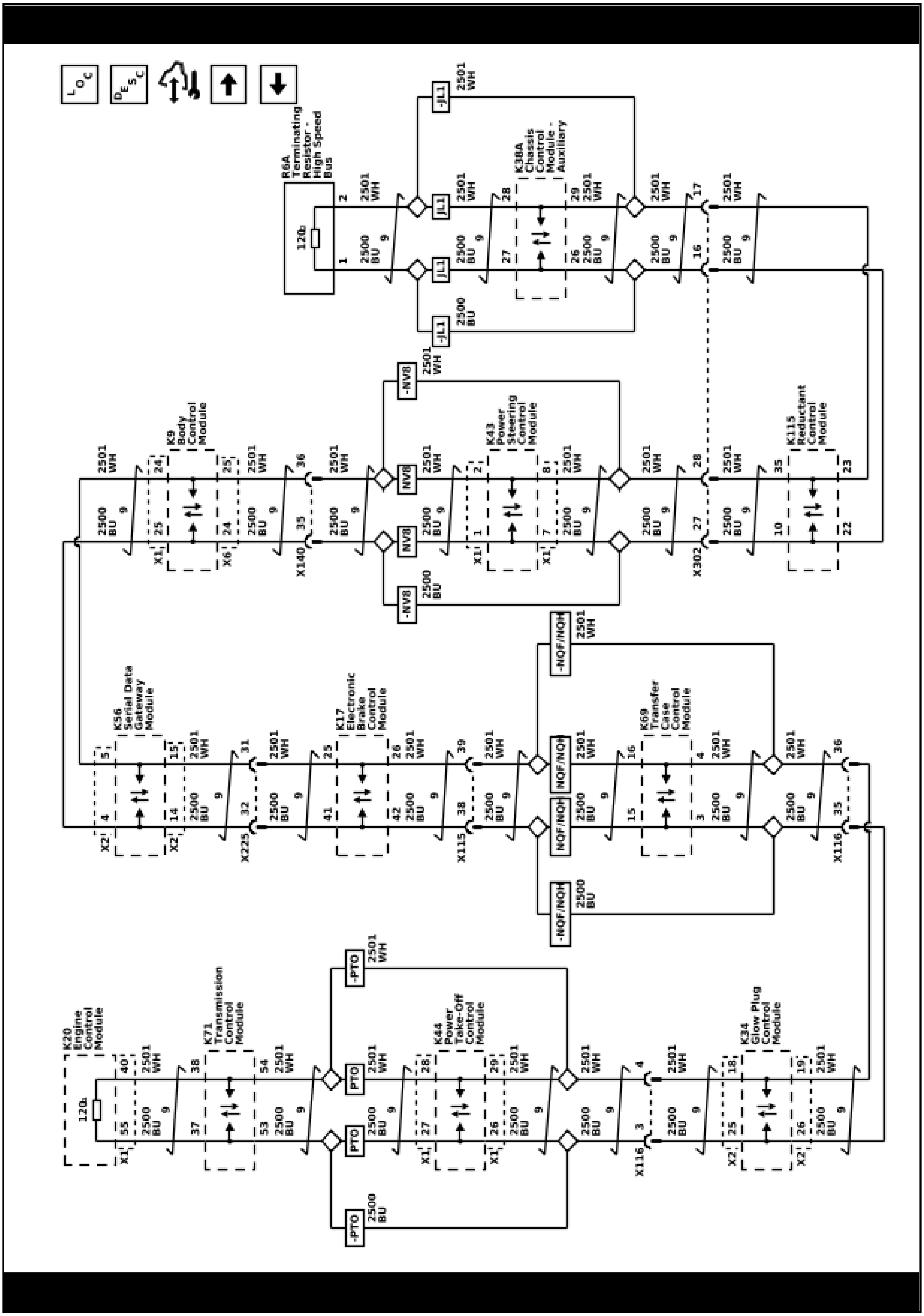

F49DR
IGN
X4 22
K9 Body Control Module
IGN
23
5985 VT/YE
5986 WH/BU
J346
J219
KI4
KI5
X115 22
X241 3
K71 Transmission Control Module
IGN
9 (MYD)
51(MGM/MGU)
J154
L5P
X116 17
X171 1
L8T+JL1
L5P+JL1
L5P-JL1
J362
X302 15
443 VT/YE
X138 9
X1 12
K43 Power Steering Control Module
X115 17
NQH/NQF-PTO
PTO+NQH/NQF
PTO-NQH/NQF
J161
X225 28
IOR-UEU-UE1-UDD
UEU/UE1/UDD
J220
UE1
UEU
IOS/IOT
UDD
X256 16
9
K17 Electronic Brake Control Module
X1 17
K36 Inflatable Restraint Sensing and Diagnostic Module
X2 3
IGN
T1 Accessory DC/AC Power Inverter Module
X1 7 (L5P)
X1 33(L8T)
IGN
K20 Engine Control Module
X2 40
IGN
K34 Glow Plug Control Module
14
K38A Chassis Control Module - Auxiliary
17
K115 Reductant Control Module
18
K69 Transfer Case Control Module
X1 14
K44 Power Take-Off Control Module
X2 25
K56 Serial Data Gateway Module
X1 12
K73 Telematics Communication Interface Control Module
9
B174W Frontview Camera - Windshield
X1 23
A11 Radio
X1 23
P16 Instrument Cluster
LOC
DESC
5995501

Data Communication Schematics (Powertrain Sensor High Speed GMLAN)

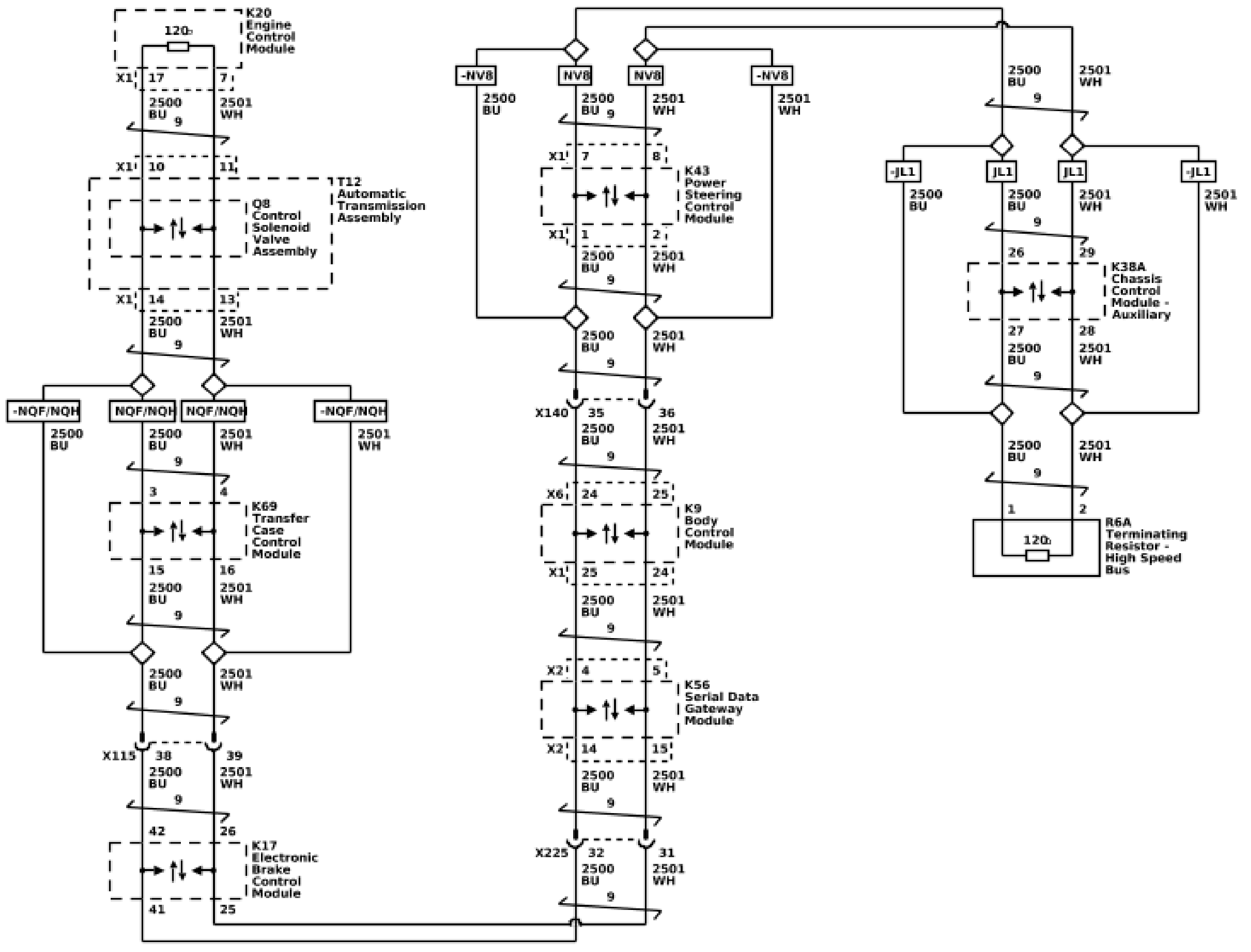

K20 Engine Control Module
120Ω
X1
54
39
13
3
L5P
L8T
4498 BU/BN 9
4499 WH
X116
1
2
33
34
4
3
M103 Turbocharger Vane Position Actuator
5
B195A Nitrogen Oxides Sensor 1
X171
X302
11
12
32
K115 Reductant Control Module
31
22
23
B195B Nitrogen Oxides Sensor 2
B136 Exhaust Particulate Matter Sensor
K111 Fuel Pump Driver Control Module
30
7
15(-N2N)
8 (N2N)
L8T/L5P
L5P+N2N
X351
50
52
J363
J364

5995502

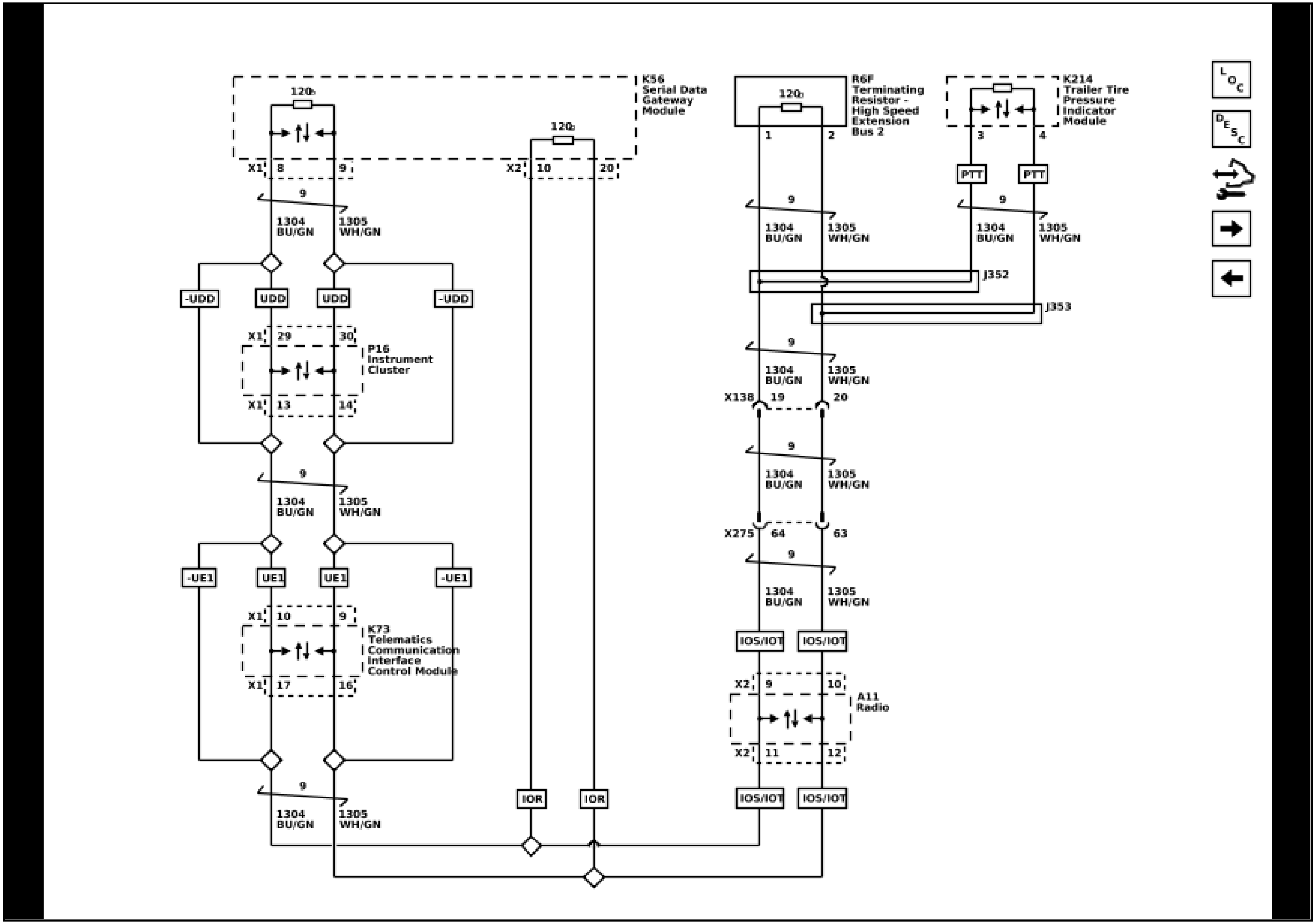
Data Communication Schematics (High Speed GMLAN (L5P))


5995503
L O C
D E S C
R6A Terminating Resistor - High Speed Bus
120Ω
K38A Chassis Control Module - Auxiliary
JL1
-JL1
K9 Body Control Module
K43 Power Steering Control Module
K115 Reductant Control Module
NV8
-NV8
K56 Serial Data Gateway Module
K17 Electronic Brake Control Module
K69 Transfer Case Control Module
NQF/NQH
-NQF/NQH
K20 Engine Control Module
K71 Transmission Control Module
K44 Power Take-Off Control Module
K34 Glow Plug Control Module
PTO
-PTO
X1
X2
X6
X115
X116
X140
X225
X302
2500 BU 9
2501 WH 9
2500 BU
2501 WH

Data Communication Schematics (High Speed GMLAN (L8T))

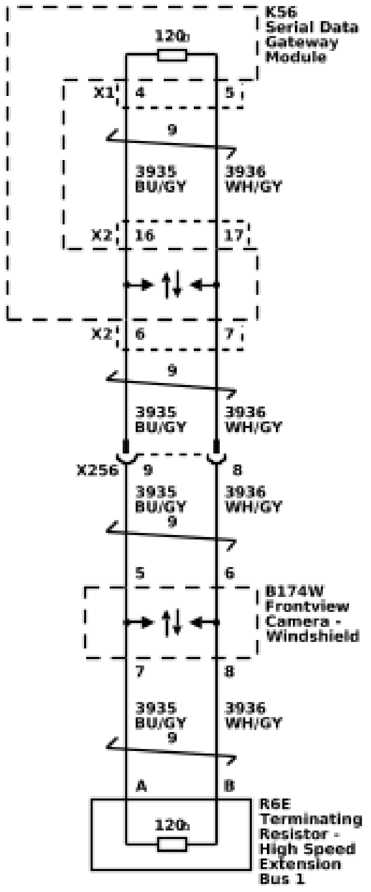

K20 Engine Control Module
120Ω
X1 17
7
2500 BU
2501 WH
9
X1 10
11
T12 Automatic Transmission Assembly
Q8 Control Solenoid Valve Assembly
X1 14
13
-NQF/NQH
NQF/NQH
K69 Transfer Case Control Module
3
4
15
16
X115 38
39
K17 Electronic Brake Control Module
42
26
41
25
-NV8
NV8
X1 7
8
K43 Power Steering Control Module
X1 1
2
X140 35
36
X6 24
25
K9 Body Control Module
X1 25
24
X2 4
5
K56 Serial Data Gateway Module
X2 14
15
X225 32
31
-JL1
JL1
26
29
K38A Chassis Control Module - Auxiliary
27
28
1
2
R6A Terminating Resistor - High Speed Bus
5995504

Data Communication Schematics (Gateway Isolated High Speed GMLAN)


K56 Serial Data Gateway Module
120Ω
X1 8 9
X2 10 20
9
1304 BU/GN
1305 WH/GN
-UDD
UDD
X1 29 30
P16 Instrument Cluster
X1 13 14
-UE1
UE1
X1 10 9
K73 Telematics Communication Interface Control Module
X1 17 16
IOR
R6F Terminating Resistor - High Speed Extension Bus 2
1 2
K214 Trailer Tire Pressure Indicator Module
3 4
PTT
J352
J353
X138 19 20
X275 64 63
IOS/IOT
X2 9 10
A11 Radio
X2 11 12

5995505

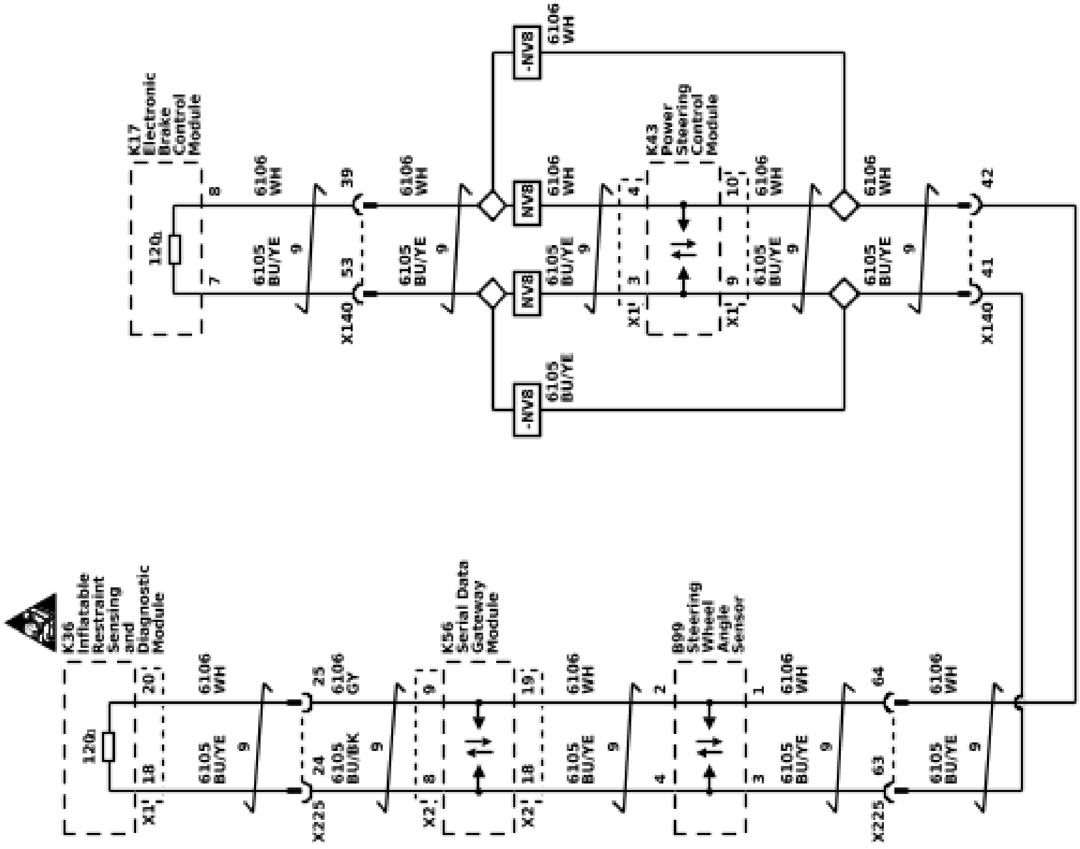
Data Communication Schematics (Gateway Expansion High Speed GMLAN (UEU))


K56
Serial Data
Gateway
Module
120Ω
X1
4
5
9
3935
BU/GY
3936
WH/GY
X2
16
17
X2
6
7
9
3935
BU/GY
3936
WH/GY
X256
9
8
3935
BU/GY
3936
WH/GY
9
5
6
B174W
Frontview
Camera -
Windshield
7
8
3935
BU/GY
3936
WH/GY
9
A
B
R6E
Terminating
Resistor -
High Speed
Extension
Bus 1
120Ω

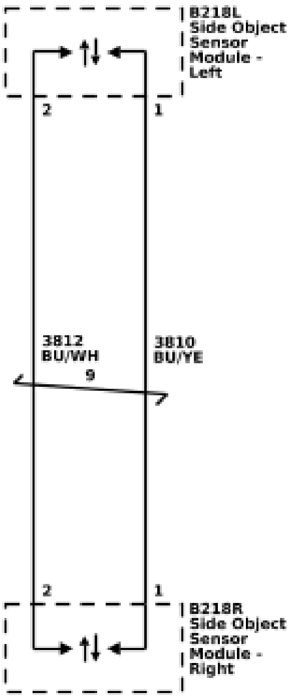
5995506

5995507

Data Communication Schematics (Chassis High Speed GMLAN)

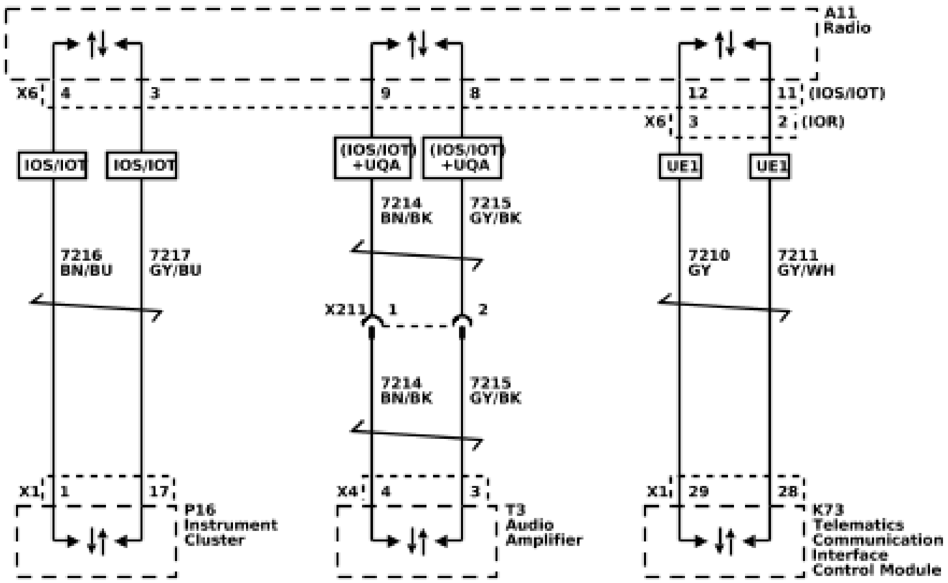

K36 Inflatable Restraint Sensing and Diagnostic Module
120Ω
X1
18
20
6105 BU/YE
6106 WH
9
X225
24
25
6105 BU/BK
6106 GY
K56 Serial Data Gateway Module
X2
8
9
18
19
B99 Steering Wheel Angle Sensor
4
2
3
1
63
64
K17 Electronic Brake Control Module
7
8
X140
53
39
NV8
-NV8
K43 Power Steering Control Module
3
4
10
41
42

Data Communication Schematics (Object High Speed GMLAN (UKC))


B218L
Side Object
Sensor
Module -
Left
2
1
3812
BU/WH
9
3810
BU/YE
2
1
B218R
Side Object
Sensor
Module -
Right

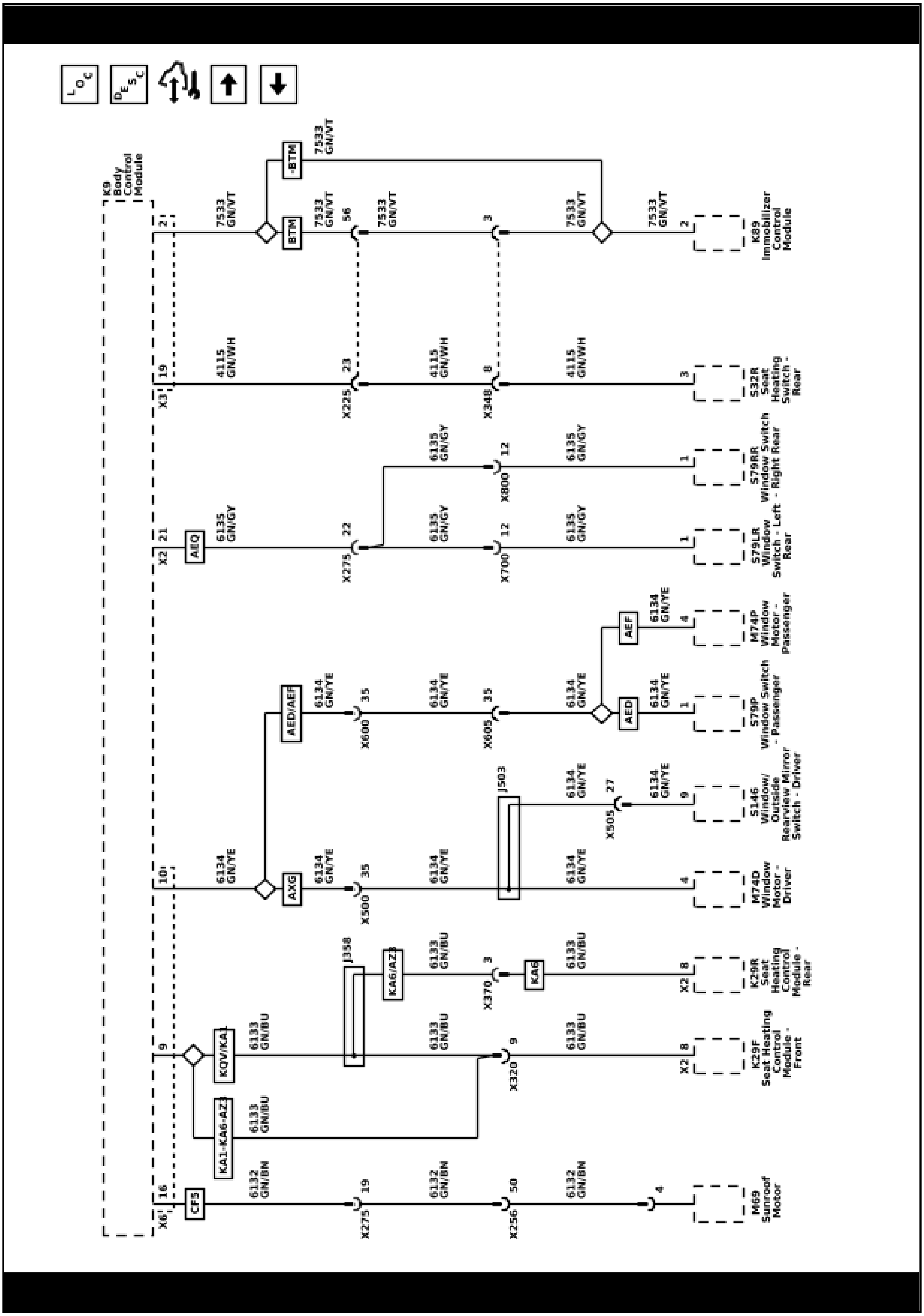
5995508

Data Communication Schematics (Ethernet Bus)


A11
Radio
X6
4
3
9
8
12
11
(IOS/IOT)
X6
3
2
(IOR)
IOS/IOT
IOS/IOT
(IOS/IOT)
+UQA
(IOS/IOT)
+UQA
UE1
UE1
7216
BN/BU
7217
GY/BU
7214
BN/BK
7215
GY/BK
7210
GY
7211
GY/WH
X211
1
2
7214
BN/BK
7215
GY/BK
X1
1
17
P16
Instrument
Cluster
X4
4
3
T3
Audio
Amplifier
X1
29
28
K73
Telematics
Communication
Interface
Control Module

5995509

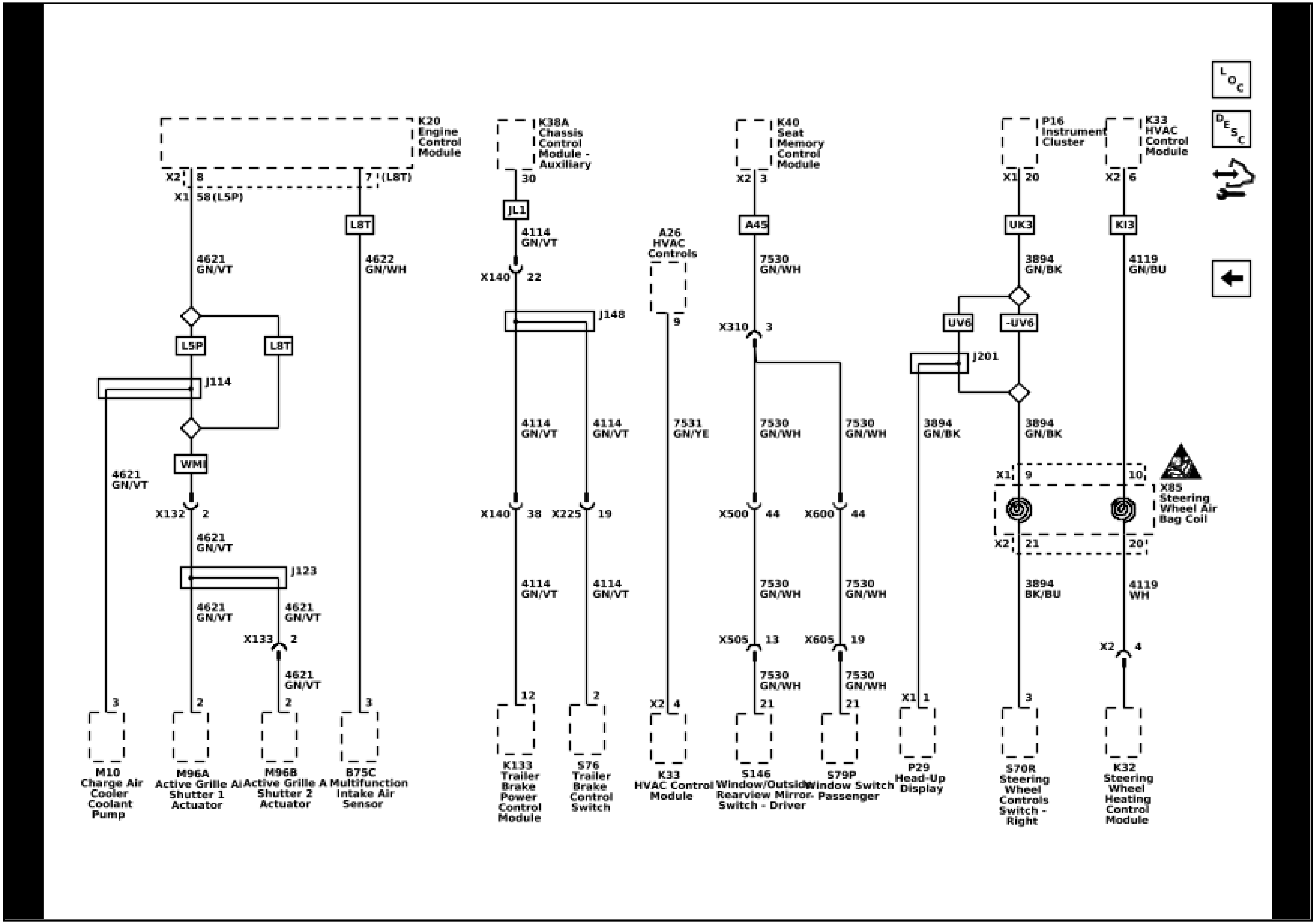
Data Communication Schematics (Local Interconnect Network LIN (1 of 2))



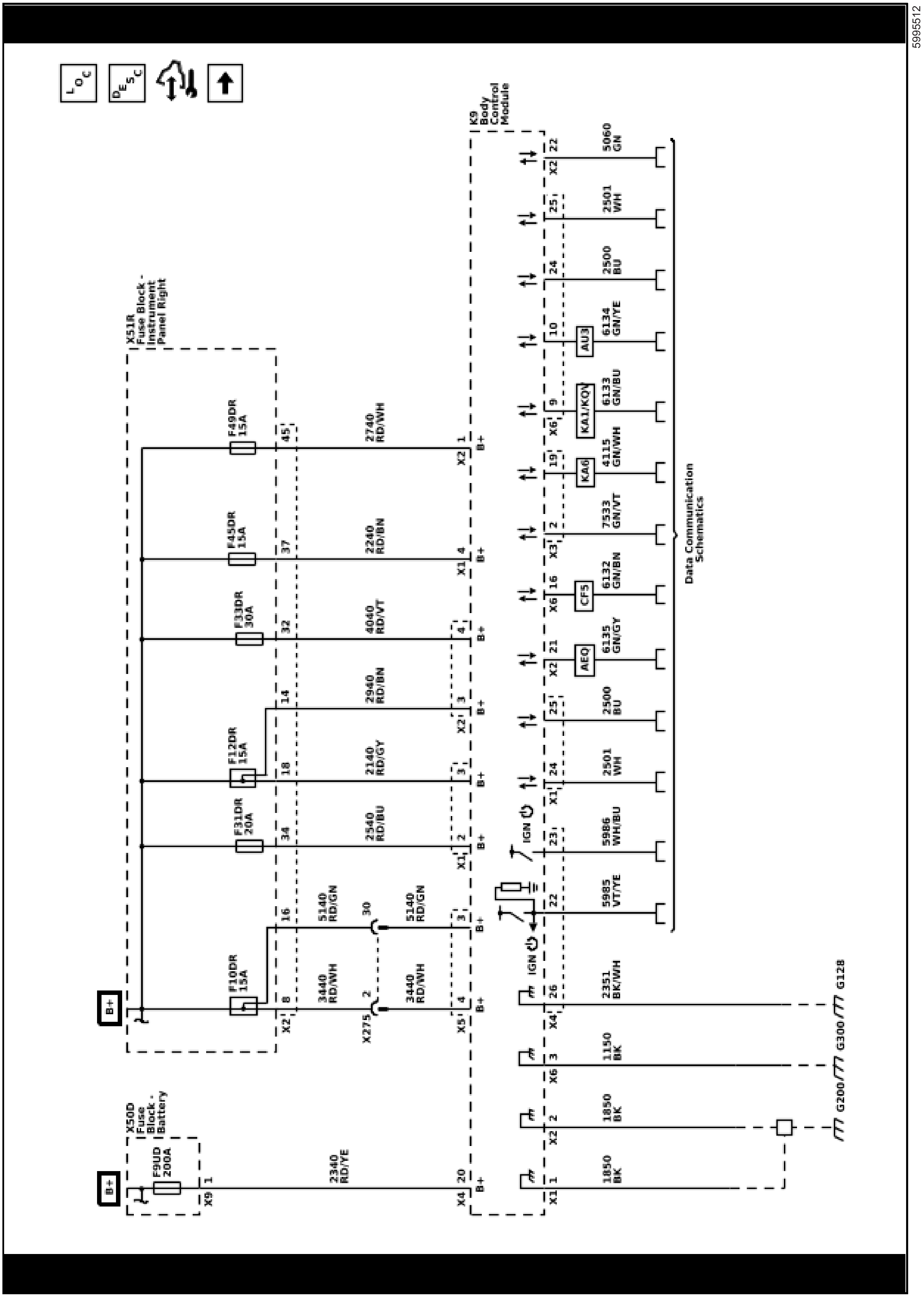
K9 Body Control Module
X6 16
X6 9
X2 21
X3 19
2
10
CF5
KQV/KA1
KA1-KA6-AZ3
AXG
AED/AEF
AEQ
BTM
-BTM
6132 GN/BN
6133 GN/BU
6134 GN/YE
6135 GN/GY
4115 GN/WH
7533 GN/VT
X275 19
X256 50
X320 9
J358
KA6/AZ3
X370 3
KA6
X500 35
J503
X505 27
X600 35
X605 35
AED
AEF
X275 22
X700 12
X800 12
X225 23
X348 8
56
3
M69 Sunroof Motor 4
K29F Seat Heating Control Module - Front X2 8
K29R Seat Heating Control Module - Rear X2 8
M74D Window Motor - Driver 4
S146 Window/Outside Rearview Mirror Switch - Driver 9
S79P Window Switch - Passenger 1
M74P Window Motor - Passenger 4
S79LR Window Switch - Left Rear 1
S79RR Window Switch - Right Rear 1
S32R Seat Heating Switch - Rear 3
K89 Immobilizer Control Module 2

5995510

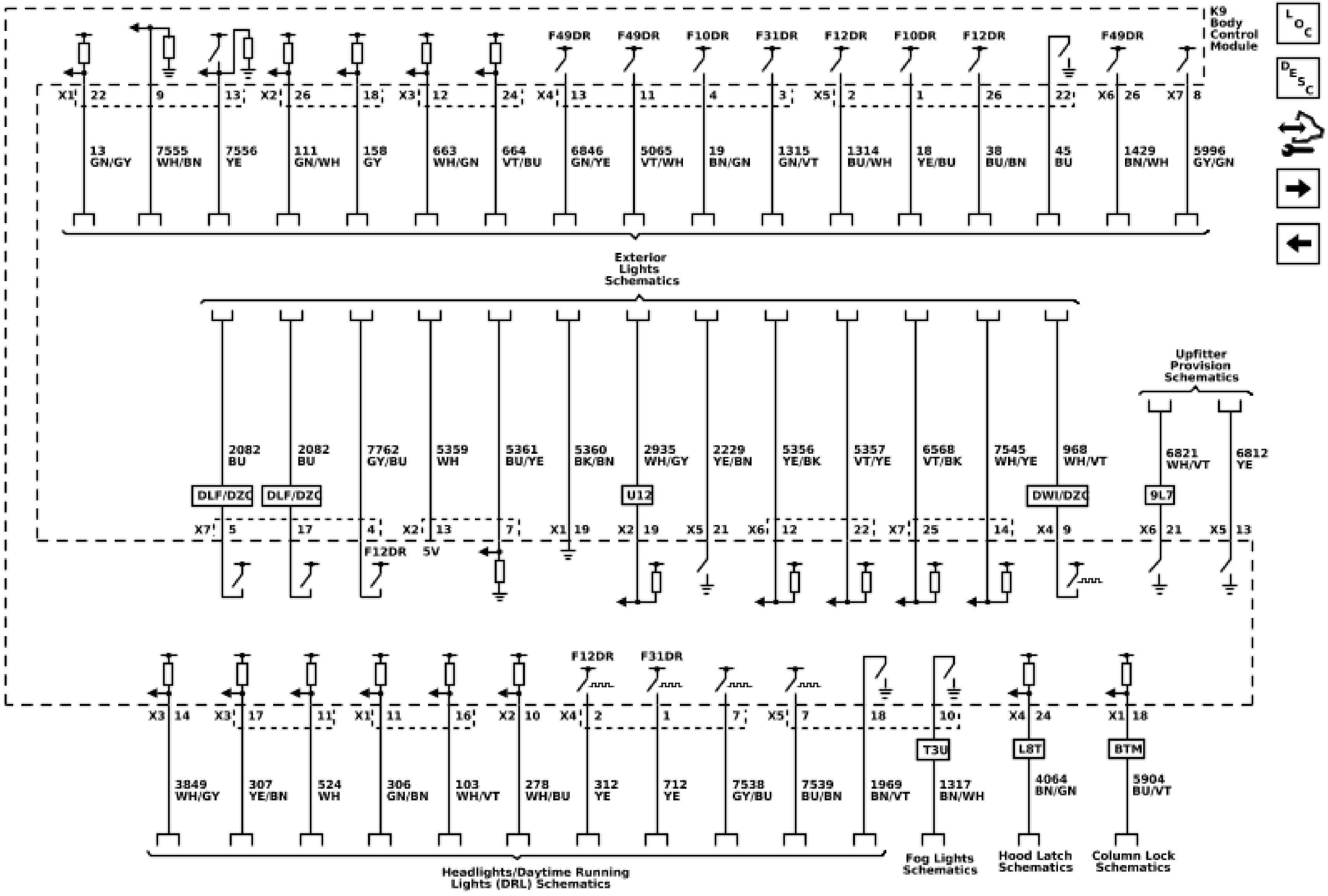
Data Communication Schematics (Local Interconnect Network LIN (2 of 2))


K20 Engine Control Module
X2 8
X1 58 (L5P)
7 (L8T)
L8T
4621 GN/VT
4622 GN/WH
L5P
L8T
J114
WMI
4621 GN/VT
X132 2
4621 GN/VT
J123
4621 GN/VT
4621 GN/VT
X133 2
4621 GN/VT
3
2
2
3
M10 Charge Air Cooler Coolant Pump
M96A Active Grille Air Shutter 1 Actuator
M96B Active Grille Air Shutter 2 Actuator
B75C Multifunction Intake Air Sensor
K38A Chassis Control Module - Auxiliary
30
JL1
4114 GN/VT
X140 22
J148
4114 GN/VT
4114 GN/VT
X140 38
X225 19
4114 GN/VT
4114 GN/VT
12
2
K133 Trailer Brake Power Control Module
S76 Trailer Brake Control Switch
A26 HVAC Controls
9
7531 GN/YE
X2 4
K33 HVAC Control Module
K40 Seat Memory Control Module
X2 3
A45
7530 GN/WH
X310 3
7530 GN/WH
7530 GN/WH
X500 44
X600 44
7530 GN/WH
7530 GN/WH
X505 13
X605 19
7530 GN/WH
7530 GN/WH
21
21
S146 Window/Outside Rearview Mirror Switch - Driver
S79P Window Switch - Passenger
P16 Instrument Cluster
X1 20
UK3
3894 GN/BK
UV6
-UV6
J201
3894 GN/BK
3894 GN/BK
X1 1
P29 Head-Up Display
K33 HVAC Control Module
X2 6
KI3
4119 GN/BU
X1 9
10
X85 Steering Wheel Air Bag Coil
X2 21
20
3894 BK/BU
4119 WH
X2 4
3
S70R Steering Wheel Controls Switch - Right
K32 Steering Wheel Heating Control Module
5995511

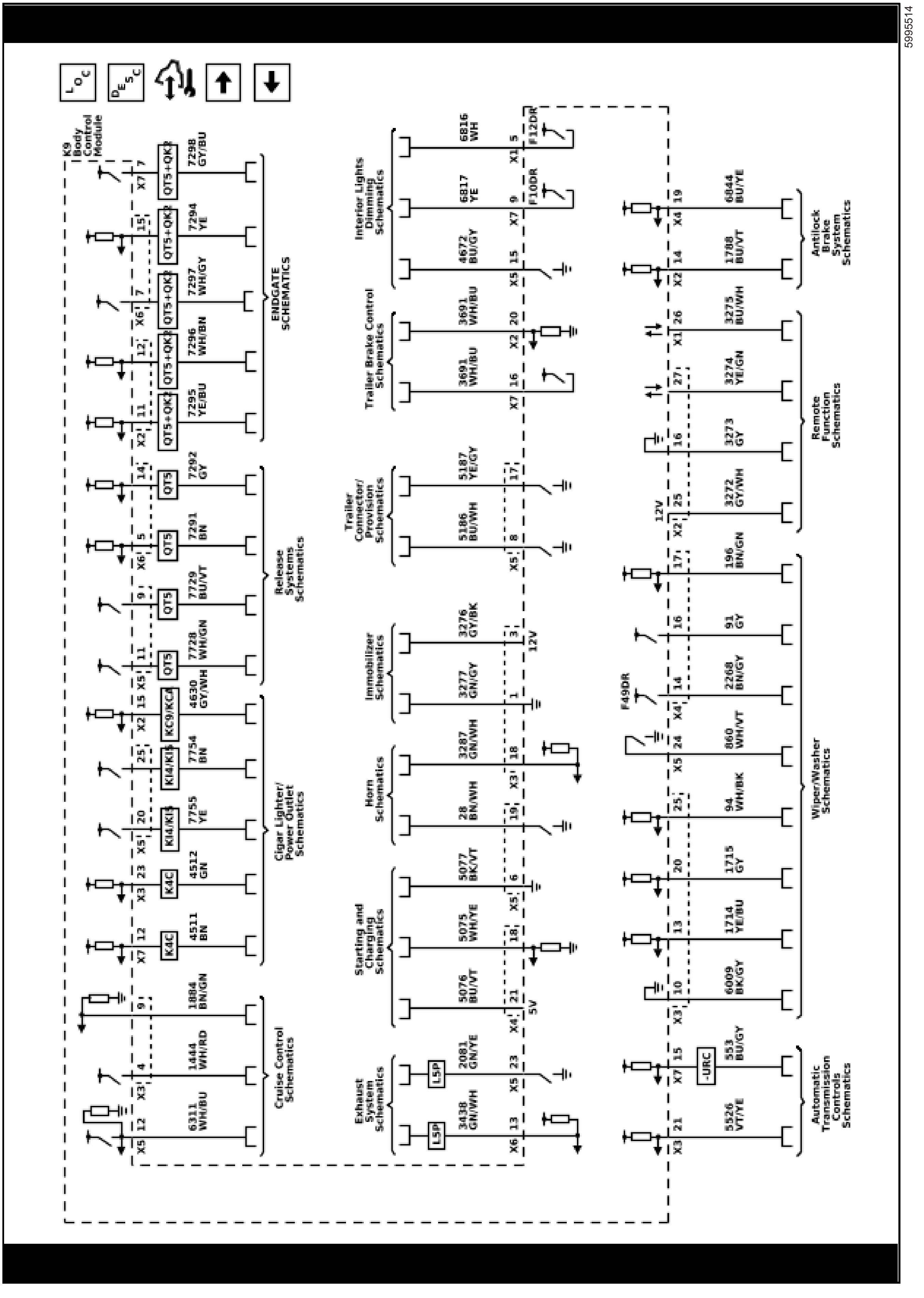
Body Control System Schematics (Module Power, Ground and Serial Data)


5995512
L O C
D E S C
B+
X50D Fuse Block - Battery
F9UD 200A
X9 1
2340 RD/YE
X4 20 B+
X51R Fuse Block - Instrument Panel Right
F10DR 15A
F31DR 20A
F12DR 15A
F33DR 30A
F45DR 15A
F49DR 15A
X2 8
16
34
18
14
32
37
45
3440 RD/WH
5140 RD/GN
2540 RD/BU
2140 RD/GY
2940 RD/BN
4040 RD/VT
2240 RD/BN
2740 RD/WH
X275 2
30
X5 4 B+
3 B+
X1 2 B+
3 B+
X2 3 B+
4 B+
X1 4 B+
X2 1 B+
K9 Body Control Module
IGN
X1 1
X2 2
X6 3
X4 26
22
23
X1 24
25
X2 21
X6 16
X3 2
19
X6 9
10
24
25
X2 22
1850 BK
1850 BK
1150 BK
2351 BK/WH
5985 VT/YE
5986 WH/BU
2501 WH
2500 BU
6135 GN/GY
6132 GN/BN
7533 GN/VT
4115 GN/WH
6133 GN/BU
6134 GN/YE
2500 BU
2501 WH
5060 GN
AEQ
CF5
KA6
KA1/KQV
AU3
G200
G300
G128
Data Communication Schematics

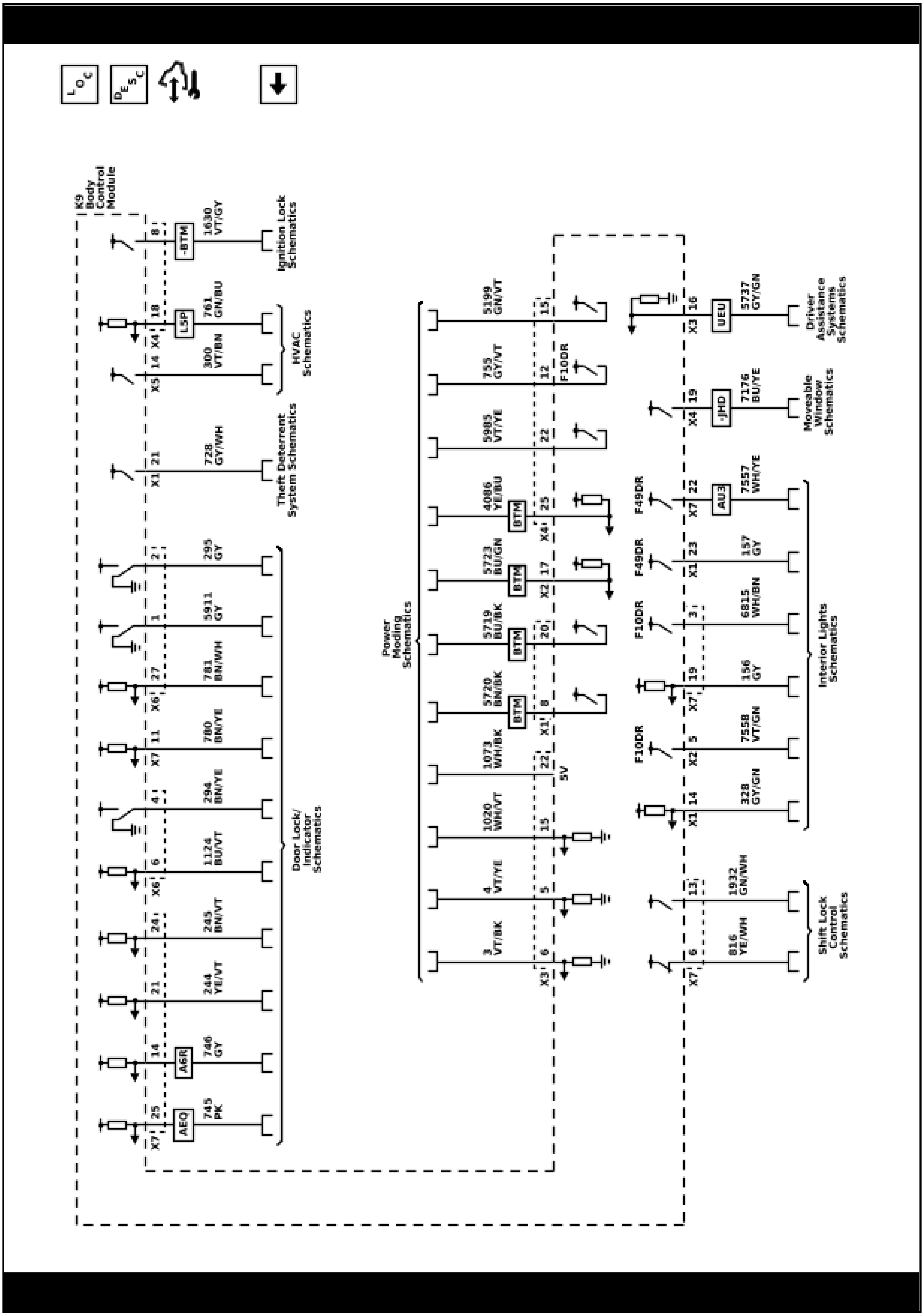
Body Control System Schematics (Subsystem Reference (1 of 3))


K9
Body
Control
Module
F49DR
F49DR
F10DR
F31DR
F12DR
F10DR
F12DR
F49DR
X1 22
9
13
X2 26
18
X3 12
24
X4 13
11
4
3
X5 2
1
26
22
X6 26
X7 8
13 GN/GY
7555 WH/BN
7556 YE
111 GN/WH
158 GY
663 WH/GN
664 VT/BU
6846 GN/YE
5065 VT/WH
19 BN/GN
1315 GN/VT
1314 BU/WH
18 YE/BU
38 BU/BN
45 BU
1429 BN/WH
5996 GY/GN
Exterior Lights Schematics
2082 BU
2082 BU
7762 GY/BU
5359 WH
5361 BU/YE
5360 BK/BN
2935 WH/GY
2229 YE/BN
5356 YE/BK
5357 VT/YE
6568 VT/BK
7545 WH/YE
968 WH/VT
DLF/DZC
DLF/DZC
U12
DWI/DZC
X7 5
17
4
F12DR
X2 13
5V
7
X1 19
X2 19
X5 21
X6 12
22
X7 25
14
X4 9
Upfitter Provision Schematics
6821 WH/VT
6812 YE
9L7
X6 21
X5 13
F12DR
F31DR
X3 14
X3 17
11
X1 11
16
X2 10
X4 2
1
7
X5 7
18
10
X4 24
X1 18
T3U
L8T
BTM
3849 WH/GY
307 YE/BN
524 WH
306 GN/BN
103 WH/VT
278 WH/BU
312 YE
712 YE
7538 GY/BU
7539 BU/BN
1969 BN/VT
1317 BN/WH
4064 BN/GN
5904 BU/VT
Headlights/Daytime Running Lights (DRL) Schematics
Fog Lights Schematics
Hood Latch Schematics
Column Lock Schematics
LOC
DESC
5995513

Body Control System Schematics (Subsystem Reference (2 of 3))


5995514
K9 Body Control Module
X5 12 6311 WH/BU
X3 4 1444 WH/RD
9 1884 BN/GN
Cruise Control Schematics
X7 12 K4C 4511 BN
X3 23 K4C 4512 GN
X5 20 KI4/KI5 7755 YE
25 KI4/KI5 7754 BN
X2 15 KC9/KCA 4630 GY/WH
Cigar Lighter/ Power Outlet Schematics
X5 11 QT5 7728 WH/GN
9 QT5 7729 BU/VT
X6 5 QT5 7291 BN
14 QT5 7292 GY
Release Systems Schematics
X2 11 QT5+QK3 7295 YE/BU
12 QT5+QK3 7296 WH/BN
X6 7 QT5+QK3 7297 WH/GY
15 QT5+QK3 7294 YE
X7 7 QT5+QK3 7298 GY/BU
ENDGATE SCHEMATICS
Exhaust System Schematics
X6 13 L5P 3438 GN/WH
X5 23 L5P 2081 GN/YE
Starting and Charging Schematics
X4 21 5076 BU/VT
5V
X5 18 5075 WH/YE
6 5077 BK/VT
Horn Schematics
19 28 BN/WH
X3 18 3287 GN/WH
Immobilizer Schematics
1 3277 GN/GY
3 3276 GY/BK
12V
Trailer Connector/ Provision Schematics
X5 8 5186 BU/WH
17 5187 YE/GY
Trailer Brake Control Schematics
X7 16 3691 WH/BU
X2 20 3691 WH/BU
Interior Lights Dimming Schematics
X5 15 4672 BU/GY
X7 9 6817 YE
F10DR
X1 5 6816 WH
F12DR
X3 21 5526 VT/YE
X7 15 -URC 553 BU/GY
Automatic Transmission Controls Schematics
X3 10 6009 BK/GY
13 1714 YE/BU
20 1715 GY
25 94 WH/BK
X5 24 860 WH/VT
X4 14 2268 BN/GY
F49DR
16 91 GY
17 196 BN/GN
Wiper/Washer Schematics
12V
X2 25 3272 GY/WH
16 3273 GY
27 3274 YE/GN
X1 26 3275 BU/WH
Remote Function Schematics
X2 14 1788 BU/VT
X4 19 6844 BU/YE
Antilock Brake System Schematics

Body Control System Schematics (Subsystem Reference (3 of 3))


5995515
K9 Body Control Module
X7 25 AEQ 745 PK
14 A6R 746 GY
21 244 YE/VT
24 245 BN/VT
X6 6 1124 BU/VT
4 294 BN/YE
X7 11 780 BN/YE
X6 27 781 BN/WH
1 5911 GY
2 295 GY
Door Lock/ Indicator Schematics
X1 21 728 GY/WH
Theft Deterrent System Schematics
X5 14 300 VT/BN
X4 18 L5P 761 GN/BU
HVAC Schematics
8 -BTM 1630 VT/GY
Ignition Lock Schematics
Power Moding Schematics
X3 6 3 VT/BK
5 4 VT/YE
15 1020 WH/VT
22 1073 WH/BK
5V
X1 8 BTM 5720 BN/BK
20 BTM 5719 BU/BK
X2 17 BTM 5723 BU/GN
X4 25 BTM 4086 YE/BU
22 5985 VT/YE
12 755 GY/VT
F10DR
15 5199 GN/VT
X7 6 816 YE/WH
13 1932 GN/WH
Shift Lock Control Schematics
X1 14 328 GY/GN
F10DR
X2 5 7558 VT/GN
X7 19 156 GY
F10DR
3 6815 WH/BN
F49DR
X1 23 157 GY
F49DR
X7 22 AU3 7557 WH/YE
Interior Lights Schematics
X4 19 -JHD 7176 BU/YE
Moveable Window Schematics
X3 16 UEU 5737 GY/GN
Driver Assistance Systems Schematics

Description and Operation

Data Link Communications Description and Operation

Note: This is an overview of different serial data buses used by GM devices to communicate with each others. Use *Data Communication Schematics on page 6-4* to find out which serial data buses are configured for a specific vehicle.

Data Link Communications Overview

There are many components in a vehicle that rely on information from other sources, transmit information to other sources, or both. Serial data communication networks provide a reliable, cost effective, way for various components of the vehicle to “talk” to one another and share information.

GM uses a number of different communication buses to insure the timely and efficient exchange of information between devices. When compared to each other, some of these buses are different in nature as far as speed, signal characteristics, and behavior. An example of this is the High Speed GMLAN and Low Speed GMLAN Buses.

On the other hand, when other buses are compared to each other they have similar characteristics and simply operate in parallel. In this case they are used to group together components which have high interaction. Examples are the High Speed GMLAN, Powertrain Expansion, and Chassis Expansion Buses. This allows them to communicate with each other on a bus with reduced message congestion insuring faster and the more timely exchange of information than if all vehicle devices were on a single bus.

The majority of information that exists within a given network generally stays local; however some information will have to be shared on other networks. Control modules designated as Gateway’s perform the function of transferring information between the various buses. A Gateway module is connected to at least 2 buses and will interact with each network according to its message strategy and transmission models.

GMLAN provides the capability for a receiving device to monitor message transmissions from other devices in order to determine if messages of interest are not being received. The primary purpose is to allow reasonable default values to be substituted for the information no longer being received. Additionally, a device may set a Diagnostic Trouble Code (DTC) to indicate that the device it is expecting information from is no longer communicating. A lost communication DTC typically is set in devices other than the device with a communication failure.

K9 Body Control Module (BCM)

The K9 Body Control Module has discrete input and output terminals to control the vehicle's body functions. The K9 Body Control Module is wired to the High Speed GMLAN Bus, Low Speed GMLAN Bus and multiple Local Interconnect Network (LIN) Buses and acts as a gateway between them. The various K9 Body Control Module input and output circuits are illustrated in the corresponding functional areas on the K9 Body Control Module electrical schematics. Refer to the *Body Control System Schematics on page 6-18* for more detailed information.

Power Mode Master

The K9 Body Control Module functions as the power mode master. The ignition switch is a low current switch with multiple discrete ignition switch signals to the power mode master for determining the power mode that will be sent over the serial data circuits to the other devices that need this information; the power mode master will activate relays and other direct outputs of the power mode master as needed. Refer to *Power Mode Description and Operation (Without BTM and/or ATH/ATS) on page 6-979* or *Power Mode Description and Operation (BTM and/or ATH/ATS) on page 6-980* for a complete description of power mode functions.

Gateway

The K9 Body Control Module functions as a gateway or translator. The purpose of the gateway is to translate serial data messages between the High Speed GMLAN Bus and the Low Speed GMLAN Bus for communication between the various devices. The gateway will interact with each network according to that network's transmission protocol. All communication between the K9 Body Control Module and a scan tool is done through the primary High Speed GMLAN Bus.

K56 Serial Data Gateway Module (Gen 3)

Note: The Data Bus Diagnostic Tool will not work with vehicles equipped with K56 Serial Data Gateway Module gen 3.

This vehicle is equipped with a K56 Serial Data Gateway Module gen 3. The K56 Serial Data Gateway Module is used to handle communications between multiple GMLAN buses and functions as a gateway to isolate the secure networks from the unsecured networks. It was created to mitigate bus loading to support cyber security and new active/advanced safety features (if equipped). The K56 Serial Data Gateway Module is used as a frame-to-frame gateway for all functional messages. Communication between the K56 Serial Data Gateway Module and a scan tool is done through the primary High Speed GMLAN bus. When the K56 Serial Data Gateway Module is not communicating, the scan tool can not communicate with the vehicle.

The K56 Serial Data Gateway Module has two microprocessors within the electronic control unit. Each microprocessor is diagnosed/programmed independently via the scan tool because the two microprocessors do not talk internally. Each of these processors are responsible for managing the traffic for specific communication buses on the vehicle. The two particular buses that they will manage are high speed and low speed. If communication does not exist or the particular micros have not been programmed, control modules won’t be able to communicate with or through the K56 Serial Data Gateway Module.

Low speed Microprocessor

- The low speed microprocessor is programmable via the X84 Data Link Connector (DLC) terminal 1. This low speed bus between the X84 Data Link Connector and the K56 Serial Data Gateway Module is called the Low Speed DLC Bus.
- The low speed microprocessor is capable of gating signals between the Low Speed DLC, the primary Low Speed GMLAN, and the Gateway Isolated Low Speed GMLAN Buses.
- The low speed microprocessor is also capable of gating signals between the Object High Speed DLC Bus (DLC terminals 3 & 11) and the Object High Speed GMLAN Bus.

High speed Microprocessor

- The high speed micro is programmable via the X84 Data Link Connector (DLC) terminals 6 & 14. This high speed bus between the X84 Data Link Connector and the K56 Serial Data Gateway Module is called High Speed DLC Bus.
- The high speed micro is capable of gating signals between the High Speed DLC, the primary High Speed GMLAN, the Gateway Expansion High Speed GMLAN, and the Gateway Isolated High Speed GMLAN Buses.
- The high speed micro is also capable of gating signals between the Chassis High Speed DLC Bus (DLC terminals 12 & 13) and the Chassis High Speed GMLAN Bus.

High Speed GMLAN Bus (Circuits 2500 & 2501)

Note: Continuity check cannot be performed between the X84 Data Link Connector and control modules on the primary High Speed GMLAN Bus.

A primary High Speed GMLAN Bus is used where data needs to be exchanged at a high enough rate to minimize the delay between the occurrence of a change in sensor value and the reception of this information by a control device using the information to adjust vehicle system performance.

The primary High Speed GMLAN serial data network consists of two twisted wires. One signal circuit is identified as GMLAN-High and the other signal circuit is identified as GMLAN-Low. At each end of the data bus there is a 120 Ω termination resistor between the GMLAN-High and GMLAN-Low circuits.

Data symbols (1's and 0's) are transmitted sequentially at a rate of 500 Kbit/s. The data to be transmitted over the bus is represented by the voltage difference between the GMLAN-High signal voltage and the GMLAN-Low signal voltage.

When the two wire bus is at rest the GMLAN-High and GMLAN-Low signal circuits are not being driven and this represents a logic "1". In this state both signal circuits are at the same voltage of 2.5 V. The differential voltage is approximately 0 V.

When a logic "0" is to be transmitted, the GMLAN-High signal circuit is driven higher to about 3.5 V and the GMLAN-Low circuit is driven lower to about 1.5 V. The differential voltage becomes approximately 2.0 (+/- 0.5) V.

High Speed DLC Bus (Circuits 1978 & 1979)

Between the X84 Data Link Connector (DLC) terminals 6 & 14 and the K56 Serial Data Gateway Module terminals 15 X1 & 16 X1, there is a high speed bus called the High Speed DLC Bus. The High Speed DLC Bus is similar to the primary High Speed GMLAN Bus. Between the GMLAN-High and GMLAN-Low circuits, there is a 120 Ω termination resistor internal to the K56 Serial Data Gateway Module. There is no terminating resistor at the DLC.

The K56 Serial Data Gateway Module uses its high speed microprocessor to gate signals between the High Speed DLC, the primary High Speed GMLAN, the Gateway Expansion High Speed GMLAN, and the Gateway Isolated High Speed GMLAN Buses.

Chassis High Speed GMLAN Bus (Circuits 6105 & 6106) (if equipped)

Note: Continuity check cannot be performed between the X84 Data Link Connector and control modules on the Chassis High Speed GMLAN Bus.

The Chassis High Speed GMLAN Bus (or Chassis Expansion Bus) is basically a copy of the High Speed GMLAN Bus except that its use is reserved for chassis components. This implementation splits message congestion between two parallel buses helping to insure timely message transmission and reception. Sometimes communication is required between the Chassis High Speed GMLAN Bus and the primary High Speed GMLAN Bus. This is accomplished by using the K17 Electronic Brake Control Module as the Gateway module. Since the Chassis High Speed GMLAN Bus and primary High Speed GMLAN Bus operate in the same manner, the diagnostics for each are similar.

Chassis High Speed DLC Bus (Circuits 1980 & 1981)

Between the X84 Data Link Connector (DLC) terminals 12 & 13 and the K56 Serial Data Gateway Module terminals 17 X1 & 18 X1, there is a high speed bus called the Chassis High Speed DLC Bus. The Chassis High Speed DLC Bus is similar to the Chassis High Speed GMLAN Bus. Between the GMLAN-High and GMLAN-Low circuits, there is a 120 Ω termination resistor internal to the K56 Serial Data Gateway Module. There is no terminating resistor at the DLC.

The K56 Serial Data Gateway Module uses its high speed microprocessor to gate signals between the Chassis High Speed DLC Bus and the Chassis High Speed GMLAN Bus.

Powertrain High Speed GMLAN Bus (Circuits 7493 & 7494) (if equipped)

Note: Continuity check cannot be performed between the X84 Data Link Connector and control modules on the Powertrain High Speed GMLAN Bus.

The Powertrain High Speed GMLAN Bus (or Powertrain Expansion Bus) is basically a copy of the High Speed GMLAN Bus except that its use is reserved for Powertrain components. The bus is optional based upon feature content. Sometimes communication is required between the Powertrain High Speed GMLAN

Bus and the primary High Speed GMLAN Bus. This is accomplished by using the K20 Engine Control Module as the Gateway module. Since the Powertrain High Speed GMLAN Bus and the primary High Speed GMLAN Bus operate in the same manner, the diagnostics for each are similar.

Powertrain Sensor High Speed GMLAN Bus (Circuits 4498 & 4499) (if equipped)

Note: Continuity check cannot be performed between the X84 Data Link Connector and control modules on the Powertrain Sensor High Speed GMLAN Bus.

The Powertrain Sensor High Speed GMLAN Bus is basically a copy of the primary High Speed GMLAN Bus except that its use is reserved for Powertrain components. The bus is optional based upon feature content. Sometimes communication is required between the Powertrain Sensor High Speed GMLAN Bus and the primary High Speed GMLAN Bus. This is accomplished by using the K20 Engine Control Module as the Gateway module. Since the Powertrain Sensor High Speed GMLAN Bus and the primary High Speed GMLAN Bus operate in the same manner, the diagnostics for each are similar.

Object High Speed GMLAN Bus (Circuits 3811 & 3813) (if equipped)

Note: Continuity check cannot be performed between the X84 Data Link Connector and control modules on the Object High Speed GMLAN Bus.

The Object High Speed GMLAN Bus is basically a copy of the High Speed GMLAN Bus except that its use is reserved for the enhanced safety system. This implementation is used to isolate the heavy communication among the enhanced safety system devices from the other vehicle buses, reducing congestion. The K124 Active Safety Control Module is connected to the Object High Speed GMLAN Bus as well as the primary High Speed GMLAN Bus, the Chassis High Speed GMLAN Bus, and the Low Speed GMLAN Bus. The K124 Active Safety Control Module acts as a Gateway module for all required communication between the Object High Speed GMLAN Bus devices and devices on these other vehicle buses. The Object High Speed GMLAN Bus operates in the same manner as the Chassis High Speed GMLAN and primary High Speed GMLAN buses and so the diagnostics are similar. The Object High Speed GMLAN Bus is physically partitioned into a Front Object Bus and a Rear Object Bus with each partition having its own communication enable circuit to activate the partition, but functional operation of both is identical. The Front Object Bus standard devices are the K124 Active Safety Control Module, the K109 Frontview Camera Module (or B174W Frontview Camera – Windshield), and the B233B Radar Sensor Module – Long Range. The Front Object Bus optional devices are the B233LF Radar Sensor Module – Short Range Left Front and the B233RF Radar Sensor Module – Short Range Right Front. The Rear Object Bus is optional and when present will have the K124 Active Safety Control Module, B233LR Radar Sensor Module – Short Range Left Rear, and B233RR Radar Sensor Module – Short Range Right Rear on the bus. All Object High Speed GMLAN Bus components are powered by the K124 Active Safety Control Module via the communication enable circuits, except the K109 Frontview Camera Module (or B174W Frontview Camera – Windshield) which is powered directly by battery.

Object High Speed DLC Bus (Circuits 2089 & 2090)

Between the X84 Data Link Connector (DLC) terminals 3 & 11 and the K56 Serial Data Gateway Module terminals 13 X1 & 14 X1, there is a high speed bus called the Object High Speed DLC Bus. The Object High Speed DLC Bus is similar to the Object High Speed GMLAN Bus. Between the GMLAN-High and GMLAN-Low circuits, there is a 120 Ω termination resistor internal to the K56 Serial Data Gateway Module. There is no terminating resistor at the DLC.

The K56 Serial Data Gateway Module uses its low speed microprocessor to gate signals between the Object High Speed DLC Bus and the Object High Speed GMLAN Bus.

Gateway Isolated High Speed GMLAN Bus (Circuits 1304 & 1305)

Note: Continuity check cannot be performed between the X84 Data Link Connector (or control modules on the primary High Speed GMLAN Bus) and control modules on the Gateway Isolated High Speed GMLAN Bus.

The Gateway Isolated High Speed GMLAN Bus is an extension of the primary High Speed GMLAN Bus except it is separated from the primary High Speed GMLAN Bus by the K56 Serial Data Gateway Module for cybersecurity protection. The K56 Serial Data Gateway Module verifies data messages being transmitted from the control modules on the Gateway Isolated High Speed GMLAN Bus back to the primary High Speed GMLAN Bus are good with valid transmitter messages. This bus does not terminate to the X84 Data Link Connector.

The Gateway Isolated High Speed GMLAN Bus consists of two twisted wires. One signal circuit is identified as GMLAN-High and the other signal circuit is identified as GMLAN-Low. At each end of the data bus there is a 120 Ω termination resistor between the GMLAN-High and GMLAN-Low circuits.

Gateway Expansion High Speed GMLAN Bus (Circuits 3935 & 3936)

Note: Continuity check cannot be performed between the X84 Data Link Connector (or control modules on the primary High Speed GMLAN Bus) and control modules on the Gateway Expansion High Speed GMLAN Bus.

The Gateway Expansion High Speed GMLAN Bus is not cybersecurity protected and does not terminate at the X84 Data Link Connector. This expansion bus is created to alleviate the throughput on the primary High Speed GMLAN Bus.

The Gateway Expansion High Speed GMLAN Bus consists of two twisted wires. One signal circuit is identified as GMLAN-High and the other signal circuit is identified as GMLAN-Low. At each end of the data bus there is a 120 Ω termination resistor between the GMLAN-High and GMLAN-Low circuits.

Ethernet Bus (if equipped)

At the core of the infotainment system is the Radio Ethernet Audio Video Bridging switch which communicates directly to each contributing Infotainment module terminator. The Ethernet harness consists of twisted pair wires from point to point. Each device on the Ethernet infotainment system sends/ receives data at 100 Mbit/s to/from a specified port at the A11 Radio. The Radio/Ethernet will also be used to program USB software update files to the devices connected to the Ethernet ports.

The A11 Radio is the Ethernet master. The Radio communicates with other devices and systems in the vehicle via GMLAN and LIN buses. Diagnostic Trouble Codes will be read on GMLAN to diagnose Ethernet, LIN and system faults. GMLAN will also be used for programming calibrations.

Media Oriented Systems Transport (MOST) Bus (Circuits 3997 & 3998) (if equipped)

The MOST Infotainment network is a dedicated high speed multimedia streaming data bus independent from GMLAN. The MOST Bus will be configured in a physical hardwired loop with each device within the bus sends and receives data on an assigned MOST addresses in a set order. Each device on the MOST Bus will be required to have twisted pair copper wires (2 transmit TX, 2 receive RX, and 1 electronic control line which is a 12 V wakeup signal line). The A11 Radio is the MOST Master and will monitor the bus for vehicle configuration, Infotainment data messages and errors on the bus. The MOST initialization consists of a short 100 ms low voltage pulse on the electronic control line (or MOST control line) connected to all devices contained on the MOST ring. This wakeup message once received by each device, will first respond with a generic device response. Once these initial responses on the MOST Bus are reported successfully without error to the A11 Radio, the second data request will record the MOST device addresses, their functionality requirements and capabilities within. The A11 Radio will learn this information and also record the address node sequence on the MOST Bus at this point. This node address list will now be stored within the A11 Radio as the MOST Bus configuration (called “Last Working MOST ID of Node 1 – 9” on scan tool data display).

When MOST receive, transmit, or control line faults are detected, transmit/receive messages will not received as expected from the wakeup request. The A11 Radio and the K74 Human Machine Interface Control Module will then perform diagnostics to isolate these MOST faults. If the MOST control line is shorted low to 0 V for excess amount of time, the A11 Radio will set a U2098 DTC and K74 Human Machine Interface Control Module will set a U0029 02 DTC. At this point the MOST Bus will be unable to communicate until the shorted MOST control line is repaired.

Once the shorted MOST control line diagnostics pass, the A11 Radio will attempt to resend the initial short pulse attempts up to 3 times on the MOST control line. If the expected responses are not received, the A11 Radio continues into a failure mode setting a U0028 DTC and will continue on to send one 300 ms long pulse, which will enable the furthest upstream transmitting device to become the surrogate MOST Master in this MOST fault/diagnostic mode. When the A11 Radio receives this new MOST Master identity, the surrogate MOST master device can be identified based on scan tool data parameter “Surrogate MOST Master Node Upstream Position”. The scan tool should be used to determine the MOST Bus configuration and direction by utilizing the “Last Working MOST ID of Node 1 – 9” parameters from the A11 Radio data display. When a fault is present, it will indicate the newly enabled “Surrogate MOST Master Node Upstream Position” from the A11 Radio. This will assist in determining where the MOST bus/control is at fault. The MOST device upstream from the surrogate MOST master device, transmit, receive, or control lines will be the suspect areas for diagnostics at this point. These faults can be associated with any of the MOST transmit, receive, or control line twisted copper wires or possibly an internal device fault.

The K74 Human Machine Interface Control Module will set a U0029 00 DTC when it diagnoses a MOST bus not communicating properly after one attempt. When the DTC U0029 00 is set by the K74 Human Machine Interface Control Module without the corresponding DTC U0028 from the A11 Radio, it will be an indication of an intermittent wiring/device condition.

FlexRay Bus (if equipped)

The FlexRay Bus is developed for safety related applications and higher data rate in real time application. The communication is time triggered. The FlexRay serial data network consists of two unshielded twisted wires to connect FlexRay nodes together. A FlexRay node is a device connected to a FlexRay Bus.

The FlexRay serial data network features 2 communication channels: channel A and channel B. Each channel may be operated at a data rate of up to 10 Mbit/s. FlexRay nodes can be connected to either both channels or a single channel. Each FlexRay channel consists of multiple branches. Each branch is a private bus. At each end of a branch, there is a 100 Ω terminating resistor connected between the pair of FlexRay serial data circuits. The terminating resistors can be external or internal to a FlexRay device.

The second FlexRay channel can be used as a redundant channel for fault toleration or to increase data rate of up to 20 Mbit/s. The dual channel configuration consists of two independent data channels for fault-tolerance. When one channel fails, the communication can still continue with reduced bandwidth.

Low Speed GMLAN Bus (Circuit 5060)

Note: Continuity check cannot be performed between the X84 Data Link Connector and control modules on the Low Speed GMLAN Bus.

Low Speed GMLAN Bus is used in applications where a high data rate is not required which allows for the use of less complex components. It is typically used for operator controlled functions where the response time requirements are slower than those required for dynamic vehicle control.

The Low Speed GMLAN Serial Data Network consists of a single wire, ground referenced bus with high side voltage drive. During on road vehicle operation data symbols (1’s and 0’s) are transmitted sequentially at the normal rate of 33.3 Kbit/s. For component programming only, a special high speed data mode of 83.3 Kbit/s may be used.

Unlike the high speed dual wire networks, the single wire low speed network does not use terminating resistors at either end of the network.

The data symbols to be transmitted over the bus are represented by different voltage signals on the bus. When the Low Speed GMLAN Bus is at rest and is not being driven, there is a low signal voltage of approximately 0.2 V. This represents a logic “1”. When a logic “0” is to be transmitted, the signal voltage is driven higher to around 4.0 V or higher.

Low Speed DLC Bus (Circuit 2100)

Between the X84 Data Link Connector (DLC) terminal 1 and the K56 Serial Data Gateway Module terminal 26 X1, there is a low speed bus called the Low Speed DLC Bus. The Low Speed DLC Bus is similar to the primary Low Speed GMLAN Bus.

The K56 Serial Data Gateway Module uses its low speed microprocessor to gate signals between the Low Speed DLC, the primary Low Speed GMLAN, and the Gateway Isolated Low Speed GMLAN Buses.

Gateway Isolated Low Speed GMLAN Bus (Circuit 1102)

Note: Continuity check cannot be performed between the X84 Data Link Connector (or control modules on the primary Low Speed GMLAN Bus) and control modules on the Gateway Isolated Low Speed GMLAN Bus.

The Gateway Isolated Low Speed GMLAN Bus is an extension of the primary Low Speed GMLAN Bus except it is separated from the primary Low Speed GMLAN Bus by the K56 Serial Data Gateway Module for cybersecurity protection. The K56 Serial Data Gateway Module verifies data messages being transmitted from the control modules on the Gateway Isolated Low Speed GMLAN Bus back to the primary Low Speed GMLAN Bus are good with valid transmitter messages. This bus does not terminate to the X84 Data Link Connector.

Local Interconnect Network (LIN) Bus

The Local Interconnect Network (LIN) Bus consists of a single wire with a transmission rate of 10.417 Kbit/s. This bus is used to exchange information between a master control module and other smart devices which provide supporting functionality. This type of configuration does not require the capacity or speed of either a High Speed GMLAN Bus or Low Speed GMLAN Bus and is thus relatively simpler.

The data symbols (1’s and 0’s) to be transmitted are represented by different voltage levels on the communication bus. When the LIN Bus is at rest and is not being driven, the signal is in a high voltage state of approximately Vbatt. This represents a logic “1”. When a logic “0” is to be transmitted, the signal voltage is driven low to about ground (0.0 V).

Communication Enable Circuit Description

Devices on High Speed GMLAN Bus enable or disable communication based on the voltage level of the Serial Data Communication Enable circuit or Accessory Wakeup Serial Data circuit. When the circuit voltage is high (around 12 V), communications are enabled. When the circuit is low, communications are disabled.

X84 Data Link Connector (DLC)

The X84 Data Link Connector is a standardized 16-cavity connector. Connector design and location is dictated by an industry wide standard, and is required to provide the following:

- Terminal 1: Low Speed GMLAN Serial Data #3 terminal (Low Speed DLC Bus)
- Terminal 3: High Speed GMLAN Serial Data (+)(13) terminal (Object High Speed DLC Bus)
- Terminal 4: Scan tool power ground terminal
- Terminal 5: Common signal ground terminal
- Terminal 6: High Speed GMLAN Serial Data (+)(11) terminal (High Speed DLC Bus)
- Terminal 11: High Speed GMLAN Serial Data (-)(13) terminal (Object High Speed DLC Bus)
- Terminal 12: High Speed GMLAN Serial Data (+)(12) terminal (Chassis High Speed DLC Bus)
- Terminal 13: High Speed GMLAN Serial Data (-)(12) terminal (Chassis High Speed DLC Bus)
- Terminal 14: High Speed GMLAN Serial Data (-)(11) terminal (High Speed DLC Bus)
- Terminal 16: Scan tool power, battery positive voltage terminal

Serial Data Reference

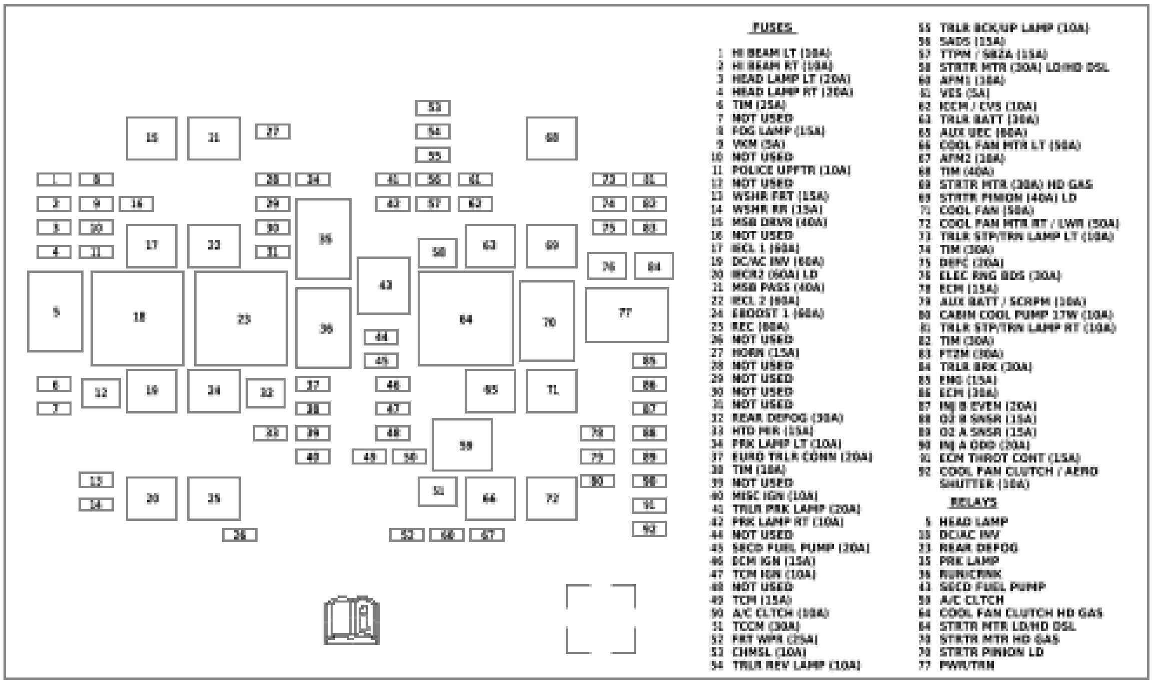
The scan tool communicates over the various buses on the vehicle. When a scan tool is installed on a vehicle, the scan tool will try to communicate with every device that could be optioned into the vehicle. If an option is not installed on the vehicle, the scan tool will display No Comm (or Not Connected) for that optional device. In order to avert misdiagnoses of No Communication with a specific device, refer to Data Link References for a list of devices and the buses they communicate with. Use schematics and specific vehicle build RPO codes to determine optional devices.

Electrical Component and Inline Harness Connector End Views

Component Locator

Electrical Center Identification Views

X50A Fuse Block - Underhood Label



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FUSES

1	HI BEAM LT (10A)
2	HI BEAM RT (10A)
3	HEAD LAMP LT (20A)
4	HEAD LAMP RT (20A)
6	TIM (25A)
7	NOT USED
8	FOG LAMP (15A)
9	VKM (5A)
10	NOT USED
11	POLICE UPFTR (10A)
12	NOT USED
13	WSHR FRT (15A)
14	WSHR RR (15A)
15	MSB DRVR (40A)
16	NOT USED
17	IECL 1 (60A)
19	DC/AC INV (60A)
20	IECR2 (60A) LD
21	MSB PASS (40A)
22	IECL 2 (60A)
24	EBOOST 1 (60A)
25	BEC (80A)
26	NOT USED
27	HORN (15A)
28	NOT USED
29	NOT USED
30	NOT USED
31	NOT USED
32	REAR DEFOG (30A)
33	HTD MIR (15A)
34	PRK LAMP LT (10A)
37	EURO TRLR CONN (20A)
38	TIM (10A)
39	NOT USED
40	MISC IGN (10A)
41	TRLR PRK LAMP (20A)
42	PRK LAMP RT (10A)
44	NOT USED
45	SECD FUEL PUMP (20A)
46	ECM IGN (15A)
47	TCM IGN (10A)
48	NOT USED
49	TCM (15A)
50	A/C CLTCH (10A)
51	TCCM (30A)
52	FRT WPR (25A)
53	CHMSL (10A)
54	TRLR REV LAMP (10A)
55	TRLR BCK/UP LAMP (10A)
56	SADS (15A)
57	TTPM / SBZA (15A)
58	STRTR MTR (30A) LD/HD DSL
60	AFM1 (10A)
61	VES (5A)
62	ICCM / CVS (10A)
63	TRLR BATT (30A)
65	AUX UEC (60A)
66	COOL FAN MTR LT (50A)
67	AFM2 (10A)
68	TIM (40A)
69	STRTR MTR (30A) HD GAS
69	STRTR PINION (40A) LD
71	COOL FAN (50A)
72	COOL FAN MTR RT / LWR (50A)
73	TRLR STP/TRN LAMP LT (10A)
74	TIM (30A)
75	DEFC (20A)
76	ELEC RNG BDS (30A)
78	ECM (15A)
79	AUX BATT / SCRPM (10A)
80	CABIN COOL PUMP 17W (10A)
81	TRLR STP/TRN LAMP RT (10A)
82	TIM (30A)
83	FT2M (30A)
84	TRLR BRK (30A)
85	EMG (15A)
86	ECM (30A)
87	INJ B EVEN (20A)
88	O2 B SNSR (15A)
89	O2 A SNSR (15A)
90	INJ A ODD (20A)
91	ECM THROT CONT (15A)
92	COOL FAN CLUTCH / AERO SHUTTER (10A)

RELAYS

5	HEAD LAMP
18	DC/AC INV
23	REAR DEFOG
35	PRK LAMP
36	RUN/CRNK
43	SECD FUEL PUMP
59	A/C CLTCH
64	COOL FAN CLUTCH HD GAS
64	STRTR MTR LD/HD DSL
70	STRTR MTR HD GAS
70	STRTR PINION LD
77	PWR/TRN

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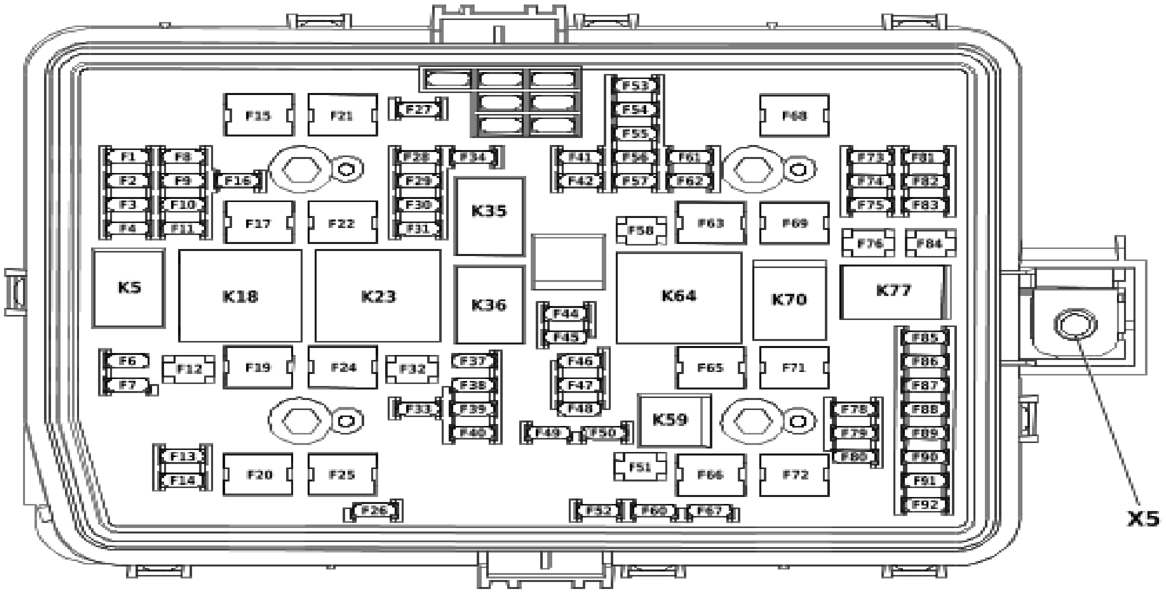
X50A Fuse Block - Underhood Top View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Usage Table

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
F1	HI BEAM LT	F1UA	10A	• E13LA Headlamp Assembly - Left
F2	HI BEAM RT	F2UA	10A	• E13RA Headlamp Assembly - Right
F3	HEAD LAMP LT	F3UA	20A	• E13LA Headlamp Assembly - Left
F4	HEAD LAMP RT	F4UA	20A	• E13RA Headlamp Assembly - Right
F6	TIM	F6UA	25A	• Not Used
F7	NOT USED	F7UA	10A	• Not Used
F8	FOG LAMP	F8UA	15A	• E29LF Fog Lamp - Left Front (T3U) • E29RF Fog Lamp - Right Front (T3U)
F9	VKM	F9UA	5A	• Not Used
F10	NOT USED	F10UA	10A	• Not Used
F11	POLICE UPFTR	F11UA	10A	• Not Used
F12	NOT USED	F12UA	30A	• Not Used
F13	WSHR FRT	F13UA	15A	• G24 Windshield Washer Pump
F14	WSHR RR	F14UA	15A	• Not Used
F15	MSB DRVR	F15UA	40A	• Not Used
F16	NOT USED	F16UA	15A	• Not Used
F17	IECL 1	F17UA	60A	• X51L Fuse Block - Instrument Panel Left (KA1/QT5)

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
F19	DC/AC INV	F19UA	60A	• T1 Accessory DC/AC Power Inverter Module (KI4/KI5)
F20	IECR2	F20UA	60A	• K17 Electronic Brake Control Module
F21	MSB PASS	F21UA	40A	• Not Used
F22	IECL 2	F22UA	60A	• X51L Fuse Block - Instrument Panel Left (BTM/A48)
F24	EBOOST 1	F24UA	60A	• K17 Electronic Brake Control Module
F25	REC	F25UA	60A	• Not Used
F26	NOT USED	F26UA	15A	• Not Used
F27	HORN	F27UA	15A	• P12 Horn
F28	NOT USED	F28UA	15A	• Not Used
F29	NOT USED	F29UA	15A	• Not Used
F30	NOT USED	F30UA	15A	• Not Used
F31	NOT USED	F31UA	15A	• Not Used
F32	REAR DEFOG	F32UA	30A	• E18 Rear Defogger Grid (C49)
F33	HTD MIR	F33UA	15A	• E17D Outside Rearview Mirror Glass - Driver (DBG/DWI/DZC) • E17P Outisde Rearview Mirror Glass - Passenger (DBG/DWI/DZC)
F34	PRK LAMP LT	F34UA	15A	• E3A Roof Clarence Lamp - Left Outer (U01) • E3C Roog Clarence Lamp - Front Middle (U01) • E3E Roof Clarence Lamp - Right Front Outer (U01) • E13LA Headlamp Assembly - Left E2LM Side Marker Lamp - Left Middle (DBG/DWI/DZC) • E42L Tail Lamp Assembly - Left
F37	EURO TRLR CONN	F37UA	20A	• Not Used
F38	TIM	F38UA	10A	• Not Used
F39	SPARE	F39UA	10A	• Not Used
F40	MISC IGN	F40UA	10A	• X51B Fuse Block - Instrument Panel Auxiliary • X176 (PTO)
F41	TRLR PRK LAMP	F41UA	20A	• Bumper Trailer Connector (Z82) • Bed Trailer Connector (Z6A) • Trailer Provisions (UY2)
F42	PRK LAMP RT	F42UA	15A	• E13RA Headlamp Assembly - Right • E42R Tail Lamp Assembly - Right • E2RM Side Marker Lamp - Right Middle (DBG/DWI/DZC)
F44	NOT USED	F44UA	5A	• Not Used
F45	SECO FUEL PUMP	F45UA	20A	• Not Used
F46	ECM IGN	F46UA	15A	• K20 Engine Control Module • K34 Glow Plug Module (L5P) • K111 Fuel Pump Control Module • K68 Trailer Lighting Control Module (U1D) • K38 Chassis Control Module - Auxiliary (JL1) • K115 Reductant Control Module (L5P)
F47	TCM IGN	F47UA	10A	• M26 Front Axle Engagement Actuator (NQH/NQF) • K71 Transmission Control Module (MGM/MGU) • Q8 Control Solenoid Valve Assembly (MYD)

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
F48	NOT USED	F48UA	10A	• Not Used
F49	TCM IGN	F49UA	15A	• Not Used
F50	A/C CLTCH	F50UA	10A	• Q2 A/C Compressor Clutch
F51	TCCM	F51UA	30A	• K69 Transfer Case Control Module (NQF/NQH)
F52	FRT WPR	F52UA	25A	• KR12B Windshield Wiper Relay • KR12C Windshield Wiper Speed Control Relay
F53	CHMSL	F53UA	10A	• E6 Center High Mounted Stop Lamp
F54	TRLR REV LAMP	F54UA	10A	• A10 Inside Rearview Mirror (DD8/DRZ) • A11 Radio • E42L Tail Lamp Assembly - Left • E42R Tail Lamp Assembly - Right
F55	TRLR BCK/UP LAMP	F55UA	10A	• Bumper Trailer Connector (Z82) • Bed Trailer Connector (Z6A) • Trailer Provisions (UY2)
F56	SADS	F56UA	15A	• Not Used
F57	TTPM/SBZA	F57UA	15A	• B218L Side Object Sensor Module - Left (UKC) • B218R Side Object Sensor Module - Right (UKC) • K214 Trailer Tire Pressure Indicator Module (PTT)
F58	STRTR MTR LD/ HD DSL	F58UA	30A	• KR27 Starter Relay (L5P)
F60	AFM1	F60UA	10A	• Not Used
F61	VES	F61UA	5A	• K43 Power Steering Control Module (NV8)
F62	ICCM/CVS	F62UA	10A	• Q13 Evaporative Emission Vent Solenoid Valve (L8T)
F63	TRLR BATT	F63UA	30A	• Bumper Trailer Connector (Z82) • Bed Trailer Connector (Z6A) • Trailer Provisions (UY2) • X50E Fuse Block - Battery Auxiliary (K4B) X88 Trailer Connector (UD1)
F65	AUX UEC	F65UA	60A	• X50B Fuse Block - Underhood Auxiliary (L5P)
F66	COOL FAN MTR LT	F66UA	50A	• Not Used
F67	AFM2	F67UA	10A	• Not Used
F68	TIM	F68UA	40A	• Not Used
F69	STRTR MTR HD GAS STRTR PINION LD	F69UA	30A|40A	• KR27 Starter Relay (L8T)
F71	COOL FAN	F71UA	50A	• Not Used
F72	COOL FAN MTR RT/LWR	F72UA	50A	• Not Used
F73	TRLR STP/TRN LAMP LT	F73UA	10A	• Bumper Trailer Connector (Z82) • Bed Trailer Connector (Z6A) • Trailer Provisions (UY2)
F74	TIM	F74UA	30A	• K68 Trailer Lighting Control Module (U1D)
F75	DEFC	F75UA	20A	• K115 Reductant Control Module (L5P)
F76	NOT USED	F76UA	30A	• Not Used
F78	ECM	F78UA	15A	• K20 Engine Control Module
F79	AUX BATT/ SCRPM	F79UA	10A	• X50E Fuse Block Auxiliary - Battery (K4B)

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
F80	CABIN COOL PUMP 17W	F80UA	10A	• M10 Charge Air Cooler Coolant Pump (L5P)
F81	TRLR STP/TRN LAMP RT	F81UA	10A	• Bumper Trailer Connector (Z82) • Bed Trailer Connector (Z6A) • Trailer Provisions (UY2)
F82	TIM	F82UA	30A	• K68 Trailer Lighting Control Module (U1D)
F83	FTZM	F83UA	30A	• K111 Fuel Pump Driver Control Module
F84	TRLR BRK	F84UA	30A	• K38A Chassis Control Module - Auxiliary (JL1) • W24 Blunt Cut - Trailer Brakes Provision
F85	ENG	F85UA	15A	• B75C Multifunction Intake Air Sensor (L5P)
F86	ECM	F86UA	30A	• K20 Engine Control Module
F87	INJ B EVEN	F87UA	20A	• K20 Engine Control Module (L8T) • T8B Ignition Coil 2 (L8T) • T8D Ignition Coil 4 (L8T) • T8F Ignition Coil 6 (L8T) • T8H Ignition Coil 8 (L8T)
F88	O2 B SNSR	F88UA	15A	• K20 Engine Control Module (L8T) • B198 Fuel Composition Sensor (FHS) • B75C Multifunction Intake Air Sensor (L8T) • B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (L8T) • B52F Heated Oxygen Sensor - Bank 2 Sensor 2 (L8T)
F89	O2 A SNSR	F89UA	15A	• T1 Accessory DC/AC Power Inverter Module (KI4/KI5)
F90	INJ A ODD	F90UA	20A	• K20 Engine Control Module (L8T) • T8A Ignition Coil 1 (L8T) • T8C Ignition Coil 3 (L8T) • T8E Ignition Coil 5 (L8T) • T8G Ignition Coil 7 (L8T)
F91	ECM THROT CONT	F91UA	15A	• K20 Engine Control Module
F92	COOL FAN CLUTCH/AERO SHUTTER	F92UA	10A	• M96A Active Grille Air Shutter 1 Actuator (WMI) • M96B Active Grille Air Shutter 2 Actuator (WMI) • X50B Fuse Block - Underhood Auxiliary (L5P)
Relays				
K5	HEAD LAMP	KR50 Headlamp Relay	—	• F3UA • F4UA
K18	DC/AC INV	KR80 Accessory Relay	—	• F19UA (KI4/KI5)
K23	REAR DEFOG	KR5 Rear Defogger Relay	—	• F32UA • F33UA
K35	PRK LAMP	KR53 Park Lamps Relay	—	• F34UA • F41UA • F42UA

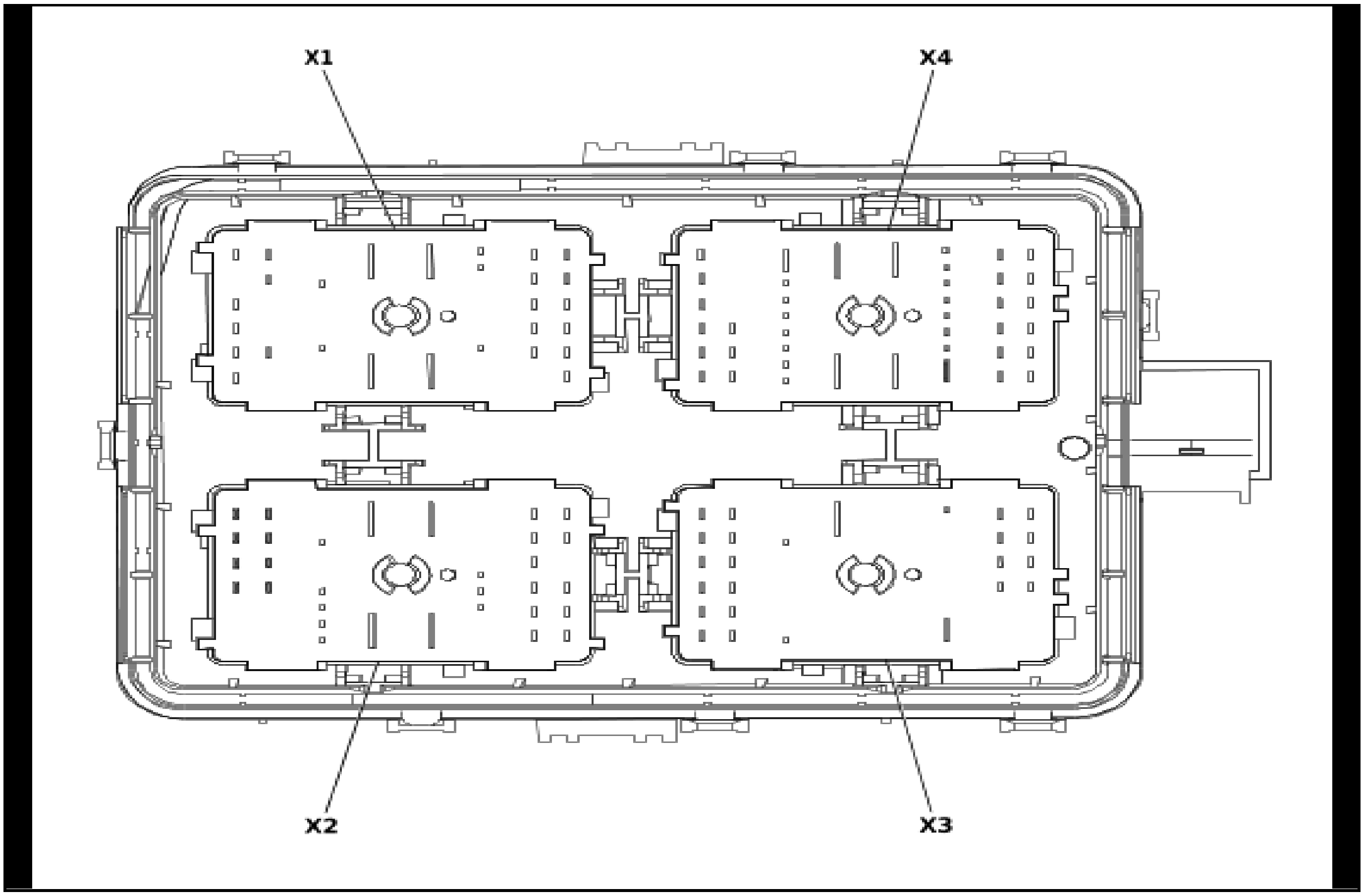
Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
K36	RUN/CRNK	KR73 Ignition Main Relay	—	• F37UA • F38UA • F39UA • F40UA • F44UA • F46UA • F47UA • F48UA
K43	SECD FUEL PUMP	—	—	• Not Used
K59	A/C CLUTCH HD GAS	KR29 A/C Compressor Clutch Relay	—	• F50UA
K64	STRTR MTR LD/ HD DSL	KR27 Starter Motor	—	• M64 Starter Motor (L8T)
K70	STRTR MTR HD GAS	KR27 Starter Motor	—	• M64 Starter Motor (L5P)
K77	PWR/TRN	KR75 Engine Controls Ignition Relay	—	• F60UA • F67UA • F85UA • F86UA • F87UA • F88UA • F89UA • F90UA • F91UA • F92UA • KR29 A/C Compressor Clutch Relay • KR33 Auxiliary Heater Coolant Pump Relay
Note: Relays listed below are non-serviceable Printed Circuit Board (PCB) relays and are internal to the block.				
—	—	KR3 Horn Relay	—	• F27UA
—	—	KR11 Windshield Washer Pump Relay	—	• F13UA
—	—	KR12B Windshield Wiper Relay	—	• M75 Windshield Wiper Motor
—	—	KR12C Windshield Wiper Speed Control Relay	—	• M75 Windshield Wiper Motor
—	—	KR33 Auxiliary Heater Coolant Pump	—	• M10 Charge Air Cooler Coolant Pump (L5P)
—	—	KR46 Front Fog Lamp Relay	—	• F8UA
—	—	KR48 Headlamp High Beam Relay	—	• F1UA • F2UA
—	—	KR59 Stop Lamp Relay	—	• F53UA
—	—	KR61 Trailer Backup Lamps Relay	—	• F54UA • F55UA
—	—	KR63L Trailer Stop/Turn Signal Lamp Relay - Left	—	• F73UA

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
—	—	KR63R Trailer Stop/Turn Signal Lamp Relay - Right	—	• F81UA

X50A Fuse Block - Underhood Bottom View



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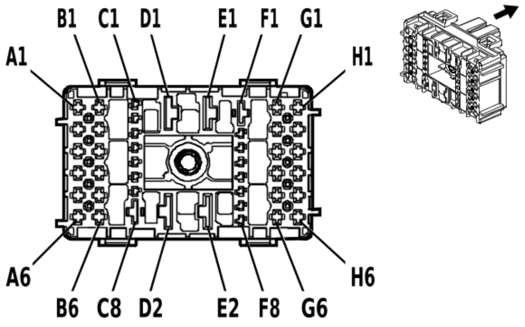
X50A Fuse Block - Underhood X1



4994109

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33384590
Service Connector: 19370824
Description: 44-Way F 1.5, 2.8, 6.3 CTS, 9.5 MCON-LL Series(BU)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19369711	J-35616-14 (GN)	EL-38125-560A
II	84779405	J-35616-35 (VT)	J-38125-215A
III	Not required	J-35616-44 (YE)	No Tool Required

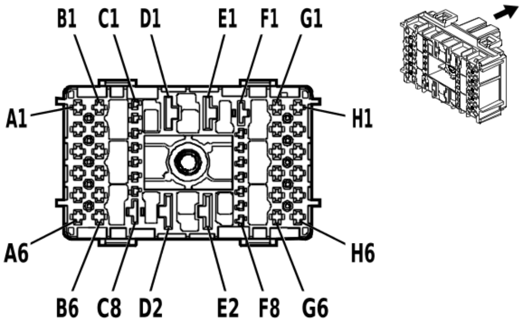
X50A Fuse Block - Underhood X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1 - A2	—	—	—	Not Occupied	—	—
A3	0.5	YE / BN	2229	Left Headlamp Relay Control	II	—
A4	0.5	BK	250	Ground	II	—
A5 - B4	—	—	—	Not Occupied	—	—
B5	0.5	GY / VT	228	Windshield Washer Pump Control	II	—
B6 - C2	—	—	—	Not Occupied	—	—
C3	0.35	WH / GN	4628	DC/AC Inverter Relay Control	I	—
C4 - C6	—	—	—	Not Occupied	—	—
C7	0.35	BN / GY	2268	Windshield Washer Relay Control	I	—
C8	—	—	—	Not Occupied	—	—
D1	10	BN / BK	4629	DC/AC Inverter Control	III	—
D2	10	RD / VT	1640	Battery Positive Voltage	III	—
E1	10	RD / YE	442	Battery Positive Voltage	III	—
E2 - F1	—	—	—	Not Occupied	—	—
F2	0.5	BN / VT	193	Rear Defogger Relay Control	I	—
F3 - F5	—	—	—	Not Occupied	—	—
F6	0.35	WH / VT	860	Windshield Wiper Switch High Signal	I	—
F7 - G1	—	—	—	Not Occupied	—	—
G2	2.5	BN / VT	293	Rear Defogger Grid Control	II	—
G3	0.5	BN / YE	2267	Outside Rearview Mirror Heater Control	II	—

X50A Fuse Block - Underhood X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
G4	0.35	GN / VT	5199	Run/Crank Relay Coil Control	II	—
G5	2	BK	150	Ground	II	—
G6	0.35	GY	91	Windshield Wiper Motor Relay Coil Control	II	—
H1 - H3	—	—	—	Not Occupied	—	—
H4	0.35	VT / WH	239	Run/Crank Ignition 1 Voltage	II	—
H5	2	WH	92	Windshield Wiper Motor High Speed Control	II	—
H6	2	YE / BN	95	Windshield Wiper Motor Low Speed Control	II	—

X50A Fuse Block - Underhood X2



Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33384594
Service Connector: 19371174
Description: 44-Way F 1.5, 2.8, 6.3 CTS, 9.5 MCON-LL Series(GN)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19369711	J-35616-14 (GN)	EL-38125-560A
II	84779405	J-35616-35 (VT)	J-38125-215A
III	Not required	J-35616-44 (YE)	No Tool Required

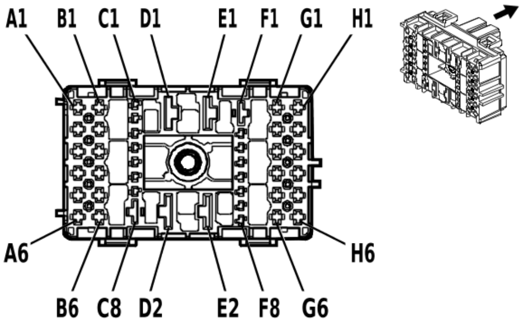
X50A Fuse Block - Underhood X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1 - A2	—	—	—	Not Occupied	—	—
A3	0.75	WH	711	Left Headlamp High Beam Control	II	—
A4	0.75	WH	311	Right Headlamp High Beam Control	II	—
A5	0.75	YE	2227	Left Headlamp Control	II	—
A6	0.75	YE / GY	2226	Right Headlamp Control	II	—
B1 - B2	—	—	—	Not Occupied	—	—
B3	0.5	BN / VT	2234	Front Fog Lamp Control	II	—
B4 - B6	—	—	—	Not Occupied	—	—
C1	0.5	BU / WH	5186	Left Trailer Turn Signal Lamp Control	I	—
C2	0.5	YE / GY	5187	Right Trailer Turn Signal Lamp Control	I	—
C3	0.5	BN / WH	1317	Fog Lamp Relay Control	I	—
C4	0.35	BN / VT	1969	Headlamp High Beam Relay Control	I	—
C5 - D1	—	—	—	Not Occupied	—	—
D2	10	RD / GY	2042	Battery Positive Voltage	III	—
E1	—	—	—	Not Occupied	—	—
E2	10	RD / VT	2142	Battery Positive Voltage	III	—
F1	—	—	—	Not Occupied	—	—
F2	0.35	VT / WH	5065	Stop Lamp Relay Coil Control	I	—
F3	0.35	BU / BN	38	Backup Lamp Relay Control	I	—
F4	0.35	BN / WH	28	Horn Relay Control	I	—

X50A Fuse Block - Underhood X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
F5 - F8	—	—	—	Not Occupied	—	—
G1	0.75	BN / GY	29	Horn Control	II	—
G2	0.35	GN / WH	24	Backup Lamp Control	II	—
G3 - G6	—	—	—	Not Occupied	—	—
H1	0.35	VT / GY	1054	Stop Lamp Control	II	—
H2	0.5	VT / GY	709	Left Park Lamp Control	II	—
H3	0.5	VT / GY	709	Left Park Lamp Control	II	—
H4	—	—	—	Not Occupied	—	—
H5	0.5	GY / BN	309	Right Park Lamp Control	II	—
H6	0.35	BU	45	Park Lamp Relay Control	II	—

X50A Fuse Block - Underhood X3



4992608

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33384584
Service Connector: 19371176
Description: 44-Way F 1.5, 2.8, 6.3 CTS, 9.5 MCON-LL Series(GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19369711	J-35616-14 (GN)	EL-38125-560A
II	84764078	J-35616-42 (RD)	J-38125-215A
III	84779405	J-35616-35 (VT)	J-38125-215A
IV	Not required	J-35616-44 (YE)	No Tool Required

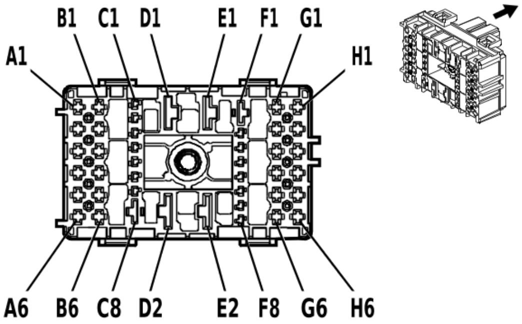
X50A Fuse Block - Underhood X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	0.5	VT / GN	439	Run/Crank Ignition 1 Voltage	III	—
A2	0.5	VT / BK	2139	Run/Crank Ignition 1 Voltage	III	—
A3	—	—	—	Not Occupied	—	—
A4	0.5	BN / GN	59	A/C Compressor Clutch Control	III	—
A5	0.75	RD / VT	7940	Battery Positive Voltage	III	—
A6	—	—	—	Not Occupied	—	—
B1	2.5	YE	6	Starter Solenoid Crank Ignition Voltage	III	—
B2	0.5	YE / BK	625	Starter Enable Relay Control	III	—
B3 - B5	—	—	—	Not Occupied	—	—
B6	3	RD / GY	1342	Battery Positive Voltage	III	—
C1 - C2	—	—	—	Not Occupied	—	—
C3	1.5 1	BK BK	4450 4450	Ground Ground	I I	L5P L8T
C4	0.5	WH / GY	459	A/C Compressor Clutch Relay Control	I	—
C5	0.5	BK / WH	451	Signal Ground	I	—
C6 - C8	—	—	—	Not Occupied	—	—
D1	10	RD / VT	4040	Battery Positive Voltage	IV	—
D2 - E2	—	—	—	Not Occupied	—	—
F1	2.5	YE	6	Starter Solenoid Crank Ignition Voltage	II	—

X50A Fuse Block - Underhood X3 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
F2	0.5	YE / BK	625	Starter Enable Relay Control	I	—
F3	0.5	RD / BN	440	Battery Positive Voltage	I	—
F4	0.5	YE	5991	Powertrain Relay Coil Control	I	—
F5	0.5	RD / WH	3440	Battery Positive Voltage	I	—
F6	—	—	—	Not Occupied	—	—
F7	0.5 0.5	WH / BK VT / BU	5267 5705	Turbocharger Cooling Fan Relay Control Powertrain Main Relay Control	I I	L5P VTI/ VWI/ VRI
F8	0.5	VT / BU	5126	Coolant Pump Control	I	—
G1	0.5	VT / BU	5294	Powertrain Main Relay Fused Supply Voltage 5	III	—
G2	0.75	VT / BU	5292	Powertrain Main Relay Fused Supply Voltage 3	III	—
G3	—	—	—	Not Occupied	—	—
G4	0.5	VT / BU	5293	Powertrain Main Relay Fused Supply Voltage 4	III	—
G5	1	VT / BU	5291	Powertrain Main Relay Fused Supply Voltage 2	III	—
G6	0.75	VT / BU	5291	Powertrain Main Relay Fused Supply Voltage 2	III	—
H1	2.5 2	VT / BU VT / BU	5290 5290	Powertrain Main Relay Fused Supply Voltage 1 Powertrain Main Relay Fused Supply Voltage 1	III III	L5P L8T
H2	1	VT / BU	5292	Powertrain Main Relay Fused Supply Voltage 3	III	—
H3	0.5	VT / BU	5294	Powertrain Main Relay Fused Supply Voltage 5	III	—
H4 - H5	—	—	—	Not Occupied	—	—
H6	0.5	VT / BU	5290	Powertrain Main Relay Fused Supply Voltage 1	III	—

X50A Fuse Block - Underhood X4



4993031

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33384574
Service Connector: 19371188
Description: 44-Way F 1.5, 2.8, 6.3 CTS, 9.5 MCON-LL Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19369711	J-35616-14 (GN)	EL-38125-560A
II	84764079	J-35616-44 (YE)	J-38125-11A
III	84779405	J-35616-35 (VT)	J-38125-215A

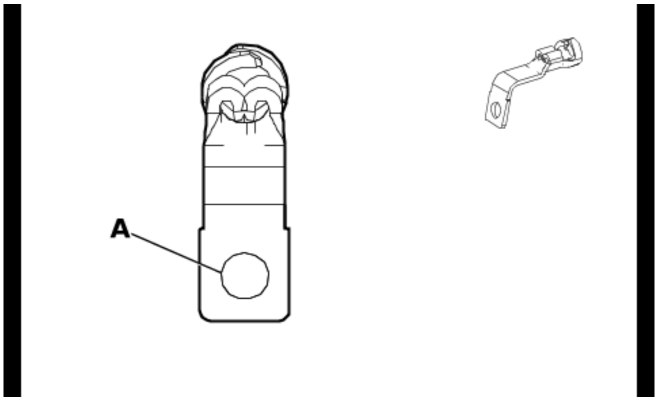
X50A Fuse Block - Underhood X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A1	—	—	—	Not Occupied	—	—
A2	0.75	VT / GY	709	Left Park Lamp Control	III	—
A3	1.5	GY / BN	2109	Trailer Park Lamp Control	III	—
A4	0.75	GY / BN	309	Right Park Lamp Control	III	—
A5 - A6	—	—	—	Not Occupied	—	—
B1	0.5	GN / WH	24	Backup Lamp Control	III	—
B2	0.75	WH / GN	1624	Trailer Backup Lamp Control	III	—
B3	—	—	—	Not Occupied	—	—
B4	0.5	RD / GN	1840	Battery Positive Voltage	III	—
B5 - B6	—	—	—	Not Occupied	—	—
C1	0.5	RD / WH	5740	Battery Positive Voltage	I	—
C2 - C6	—	—	—	Not Occupied	—	—
C7	0.5	RD / WH	2040	Battery Positive Voltage	I	—
C8 - D1	—	—	—	Not Occupied	—	—
D2	4	RD / GN	742	Battery Positive Voltage	II	—
E1 - G2	—	—	—	Not Occupied	—	—
G3	0.75	YE / BU	318	Left Rear Trailer Stop/Turn Lamp Control	III	—
G4	2.5	RD / YE	5840	Battery Positive Voltage	III	—
G5	1	RD / WH	3440	Battery Positive Voltage	III	—
G6	2.5	RD / YE	1142	Battery Positive Voltage	III	—

X50A Fuse Block - Underhood X4 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
H1 - H2	—	—	—	Not Occupied	—	—
H3	0.75	GN / VT	1619	Right Rear Trailer Stop/Turn Lamp Control	III	—
H4	2	RD / VT	5640	Battery Positive Voltage	III	—
H5	2.5	RD / VT	5340	Battery Positive Voltage	III	—
H6	2.5	RD / VT	1242	Battery Positive Voltage	III	—

X50A Fuse Block - Underhood X6 (C32)



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Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 84386513
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

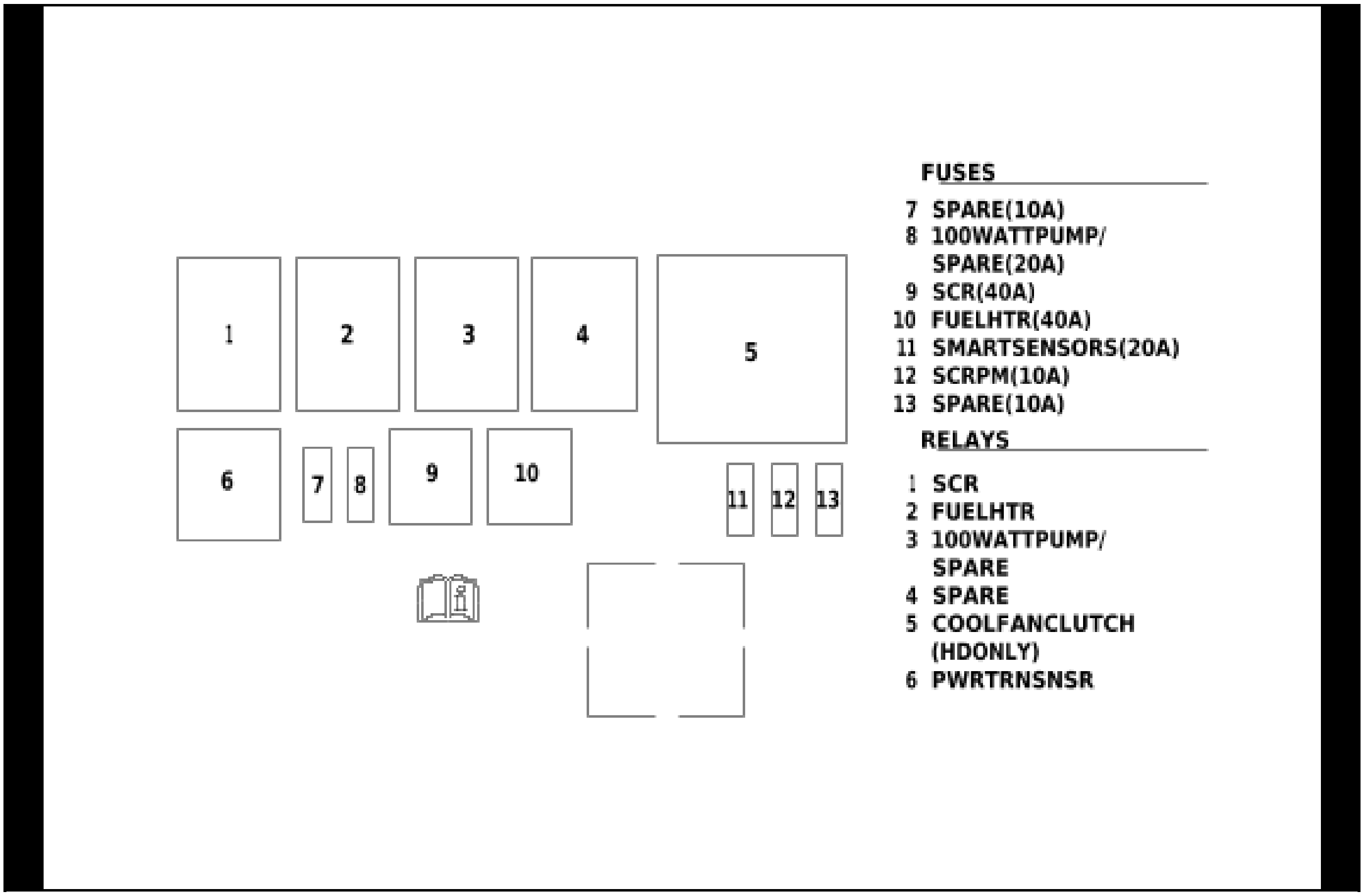
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X50A Fuse Block - Underhood X6 (C32)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	25	RD / GN	242	Battery Positive Voltage	I	—

X50B Fuse Block - Underhood Auxiliary Label (L5P)



FUSES

7	SPARE(10A)
8	100WATTPUMP/ SPARE(20A)
9	SCR(40A)
10	FUELHTR(40A)
11	SMARTSENSORS(20A)
12	SCRPM(10A)
13	SPARE(10A)

RELAYS

1	SCR
2	FUELHTR
3	100WATTPUMP/ SPARE
4	SPARE
5	COOLFANCLUTCH (HDONLY)
6	PWRTRNSNSR

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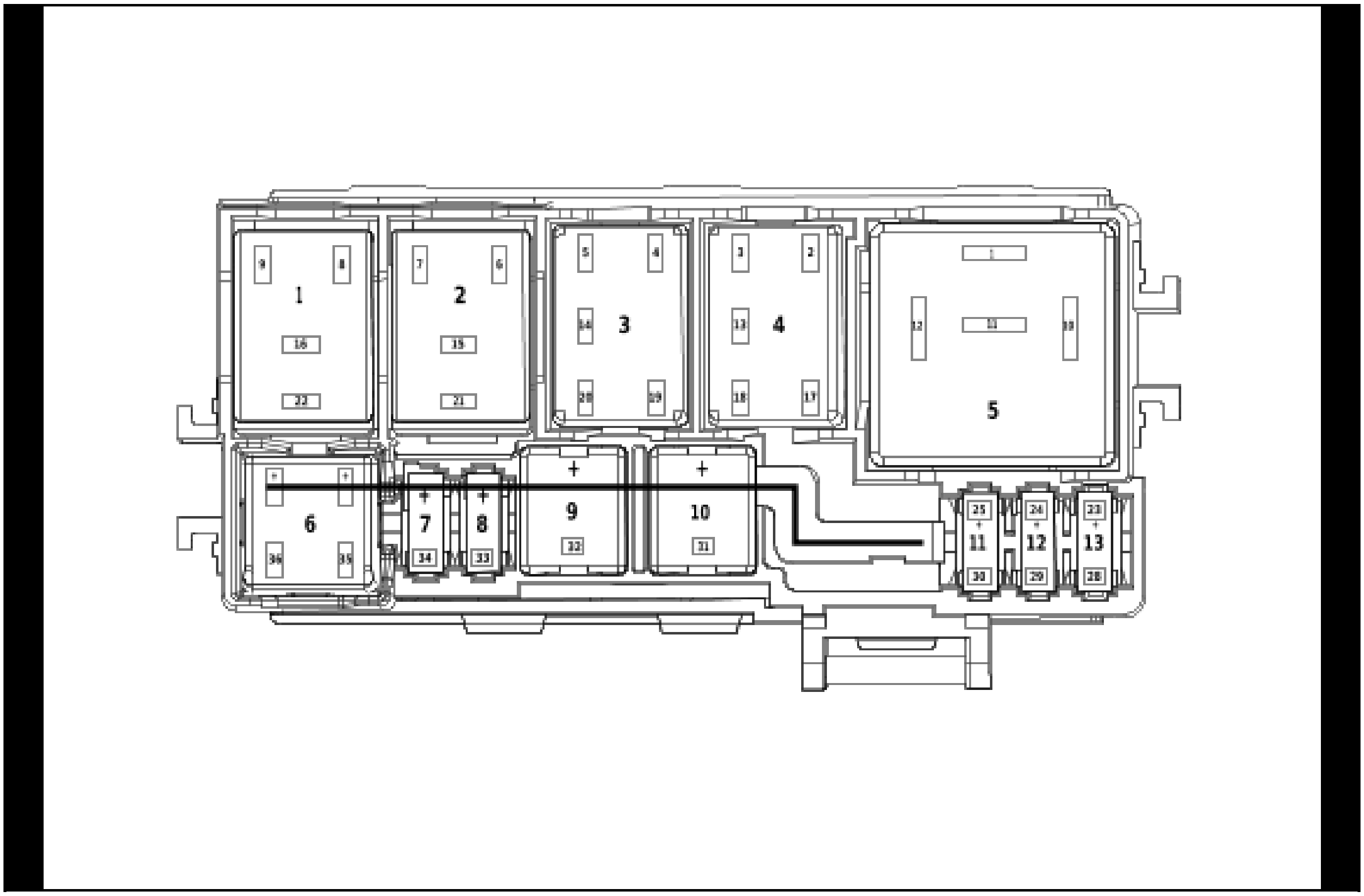
X50B Fuse Block - Underhood Auxiliary Top View (L5P)



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Usage Table

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
7	SPARE	F7UB	10A	- Not Used
8	100WATTPUMP/ SPARE	F8UB	20A	- Not Used
9	SCR	F9UB	40A	- KR121A Reductant Control Module Relay 1
10	FUELHTR	F10UB	40A	- KR22 Fuel Heater Relay
11	SMARTSENSORS	F11UB	20A	- B136 Exhaust Particulate Sensor - B195A Nitrogen Oxides Sensor 1 - B195B Nitrogen Oxides Sensor 2 - M103 TurboCharger Vane Position Actuator
12	SCRPM	F12UB	10A	- K111 Fuel Pump Driver Control Module - K115 Reductant Control Module
13	SPARE	F13UB	10A	- Not Used
Relays				
1	SCR	KR121A Reductant Control Module Relay 1	—	- K115 Reductant Control Module
2	FUELHTR	KR22 Fuel Heater Relay	—	- E11A Fuel Heater/Water in Fuel Sensor
3	100WATTPUMP/ SPARE	—	—	- Not Used

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
4	SPARE	—	—	- Not Used
5	COOLFAN-CLUTCH (HDONLY)	K20F Cooling Fan Relay	—	- K22 Cooling Fan Control Module
6	PWRTRNSNSR	KR121B Reductant Control Module Relay 2	—	- F11UB - F12UB

X50B Fuse Block - Underhood Auxiliary

—

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 35209870
Service Connector: Service by Component Assembly - See Part Catalog
Description: Wire Entry Fuse Block

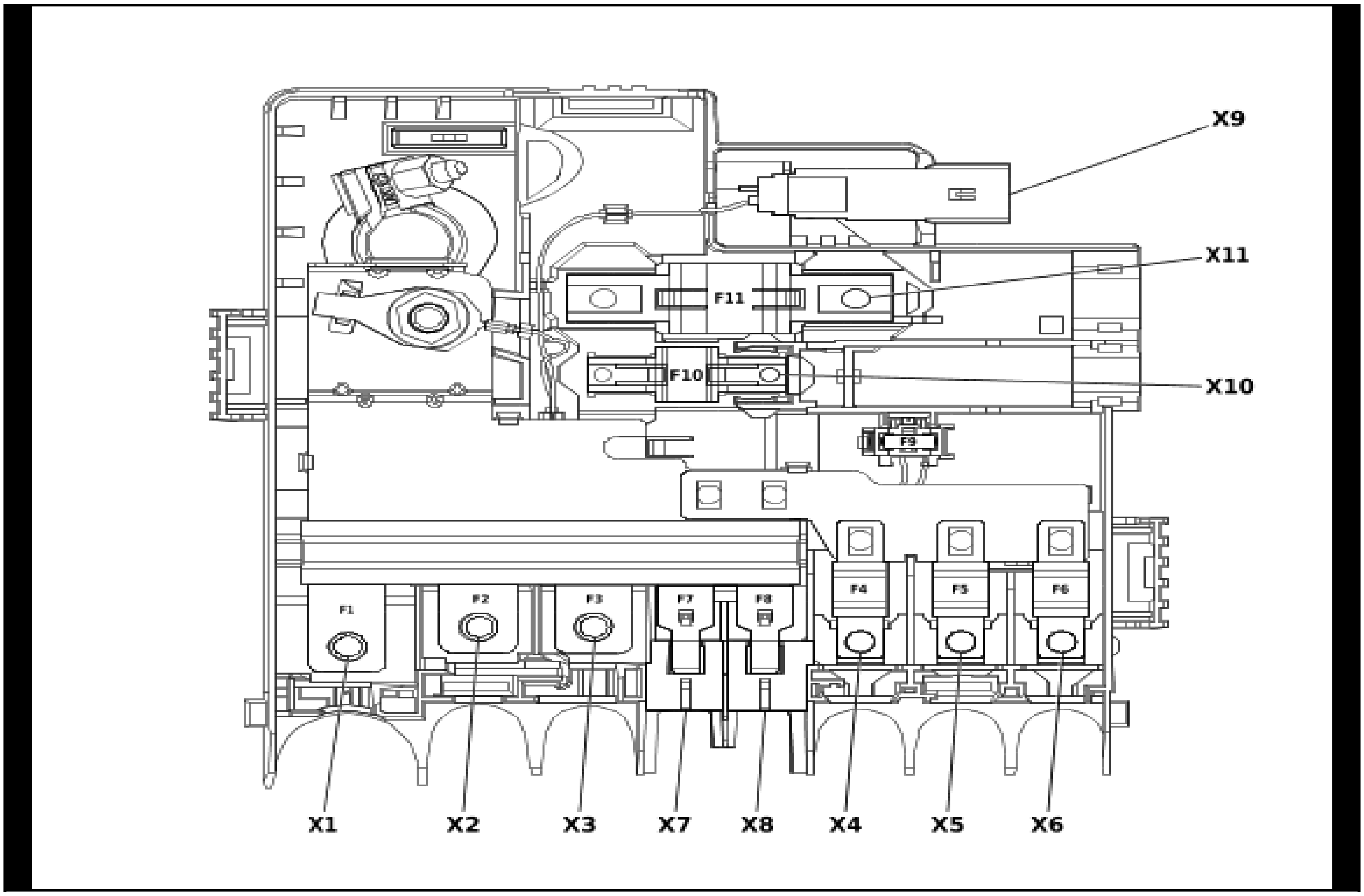
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13327158	J-35616-42 (RD)	J-38125-215A
II	13327178	J-35616-43 (RD)	J-38125-215A
III	13582244	J-35616-42 (RD)	J-38125-215A
IV	19332366	J-35616-35 (VT)	J-38125-212
V	19370816	J-35616-42 (RD)	J-38125-11A
VI	84764078	J-35616-42 (RD)	J-38125-215A
VII	Not required	J-35616-22 (RD)	No Tool Required

X50B Fuse Block - Underhood Auxiliary

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH / BK	5267	Turbocharger Cooling Fan Relay Control	VI	—
6	0.5	BU / GN	7071	Fuel Heater Control	I	—
7	2.5	VT / GN	355	Fuel Filter Heater Control Circuit	III	—
8	0.5	GN / BU	3889	Powertrain Sensor Bus Relay Control	I	—
9	2.5	BU	3921	Diesel Exhaust Fluid Heater Control 1	III	—
10	1.5	BK	4450	Ground	V	—
11	0.5	WH	2368	Cooling Fan Control Signal	VI	—
12	0.5	WH / BK	2366	Cooling Fan Speed Control Signal	VI	—
15	2.5	VT / GN	355	Fuel Filter Heater Control Circuit	III	—
16	2.5	BU	3921	Diesel Exhaust Fluid Heater Control 1	III	—
21	2.5	VT / GN	355	Fuel Filter Heater Control Circuit	III	—
22	2.5	BU	3921	Diesel Exhaust Fluid Heater Control 1	III	—
24	1.5	GN / GY	9999	—	IV	—
25	1.5	GN / GY	9999	—	IV	—
26	10	RD / VT	4040	Battery Positive Voltage	VII	—
29	1.5	VT / GN	4320	Powertrain Sensor Bus Enable	IV	—
30	2.5	VT / BU	3674	NOx Sensor 1 Control	IV	—
31	2.5	VT / GN	355	Fuel Filter Heater Control Circuit	II	—
32	2.5	BU	3921	Diesel Exhaust Fluid Heater Control 1	II	—
35	1.5	RD	9999	—	IV	—
36	0.5	GN / BU	3889	Powertrain Sensor Bus Relay Control	IV	—

X50D Fuse Block - Battery Top View



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Usage Table

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
F1	—	F1UD	175A	• G13E Generator - Auxiliary (KHF) • X50A Fuse Block - Underhood (L8T+KW7)
F2	—	F2UD	175A (L8T) 400A (L5P)	• X50E Fuse Block Battery Auxiliary (L5P) • X50A Fuse Block - Underhood (L8T)
F3	—	F3UD	400A (L8T) 500A (L5P)	• M64 Starter Motor
F4	—	F4UD	60A	• X51R Fuse Block - Instrument Panel Right
F5	—	F5UD	60A	• X51R Fuse Block - Instrument Panel Right
F6	—	F6UD	100A	• E40 Electric Auxiliary Heater (C32)
F7	—	F7UD	100A (K4B) 125A (L5P)	• X50E Fuse Block - Battery Auxiliary (K4B) • K34 Glow Plug Control Module (L5P)
F8	—	F8UD	150A	• Not Used
F9	—	F9UD	5A	• K9 Body Control Module
F10	—	F10UD	60A	• X51B Fuse Block - Instrument Panel Auxiliary
F11	—	F11UD	200A	• Not Used

X50D Fuse Block - Battery X1

—

Connector Part Information

Harness Type: Generator Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: —

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X50D Fuse Block - Battery X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	RD / YE	2	Battery Positive Voltage	I	KW5
	—	RD / GN	242	Battery Positive Voltage	I	KW7

X50D Fuse Block - Battery X2

—

Connector Part Information

Harness Type: Underhood Fuse Block Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Component Assembly - See Part Catalog
Description: Wire Entry Fuse Block

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X50D Fuse Block - Battery X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	RD / GY	242	Battery Positive Voltage	I	L5P
	—	RD / YE	2	Battery Positive Voltage	I	L8T

X50D Fuse Block - Battery X3

—

Connector Part Information

Harness Type: Starter Motor Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: —

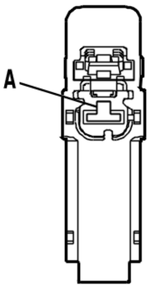
Terminal Part Information

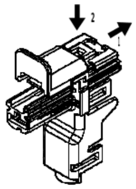
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X50D Fuse Block - Battery X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	RD / YE	2	Battery Positive Voltage	I	—

X50D Fuse Block - Battery X4





4994183

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33297578
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F 6.3 Series(BK)

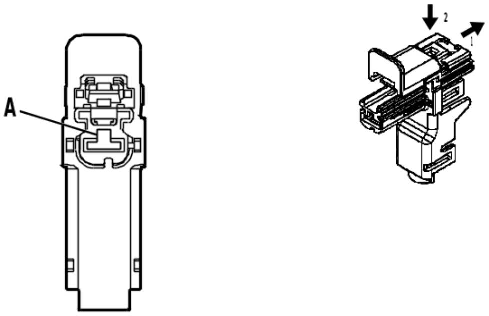
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-42 (RD)	No Tool Required

X50D Fuse Block - Battery X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	5	RD / GY	142	Battery Positive Voltage	I	—

X50D Fuse Block - Battery X5



4994171

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33297579
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F 6.3 Series(BU)

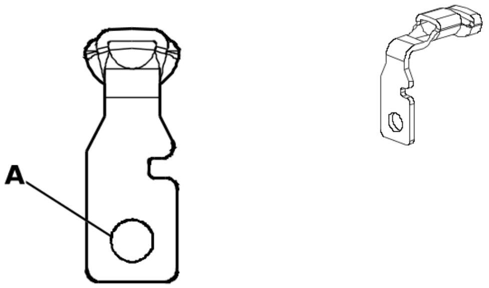
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-42 (RD)	No Tool Required

X50D Fuse Block - Battery X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	6	RD / WH	342	Battery Positive Voltage	I	—

X50D Fuse Block - Battery X6



5194789

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35085117
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X50D Fuse Block - Battery X6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	10	RD / GY	642	Battery Positive Voltage	I	—

X50D Fuse Block - Battery X7 (L5P)

—

Connector Part Information

Harness Type: Glow Plug Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way

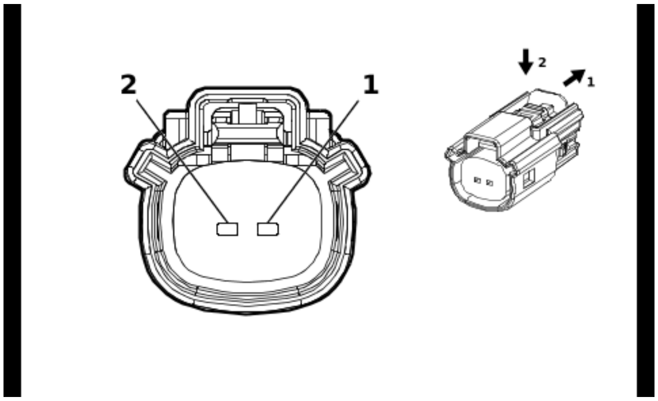
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X50D Fuse Block - Battery X7 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	RD / GN	242	Battery Positive Voltage	I	K4B
	—	RD / VT	842	Battery Positive Voltage	I	L5P

X50D Fuse Block - Battery X9



2474713

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33259367
Service Connector: 13577534
Description: 2-Way F 1.5 Series, Sealed(BK)

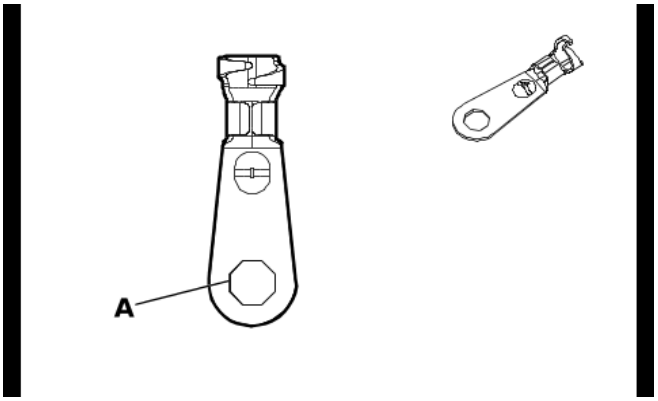
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

X50D Fuse Block - Battery X9

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD / YE	2340	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—

X50D Fuse Block - Battery X10 (9L7)



5920578

Connector Part Information

Harness Type: Battery Positive Cable Extension Cable
OEM Connector: 13624367
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X50D Fuse Block - Battery X10 (9L7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	10	RD / BU	42	Battery Positive Voltage	I	—
A	—	—	—	Not Occupied	—	—

X50E Fuse Block - Battery Auxiliary X1

—

Connector Part Information

Harness Type: Fuse Block Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X50E Fuse Block - Battery Auxiliary X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	RD / GN	242	Battery Positive Voltage	I	L5P
	—	RD / YE	2	Battery Positive Voltage	I	L8T

X50E Fuse Block - Battery Auxiliary X2 (L5P)

—

Connector Part Information

Harness Type: Battery Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X50E Fuse Block - Battery Auxiliary X2 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	RD / YE	2	Battery Positive Voltage	I	—
	—	RD / YE	2	Battery Positive Voltage	I	L5P

X50E Fuse Block - Battery Auxiliary X3

—

Connector Part Information

Harness Type: Generator Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way

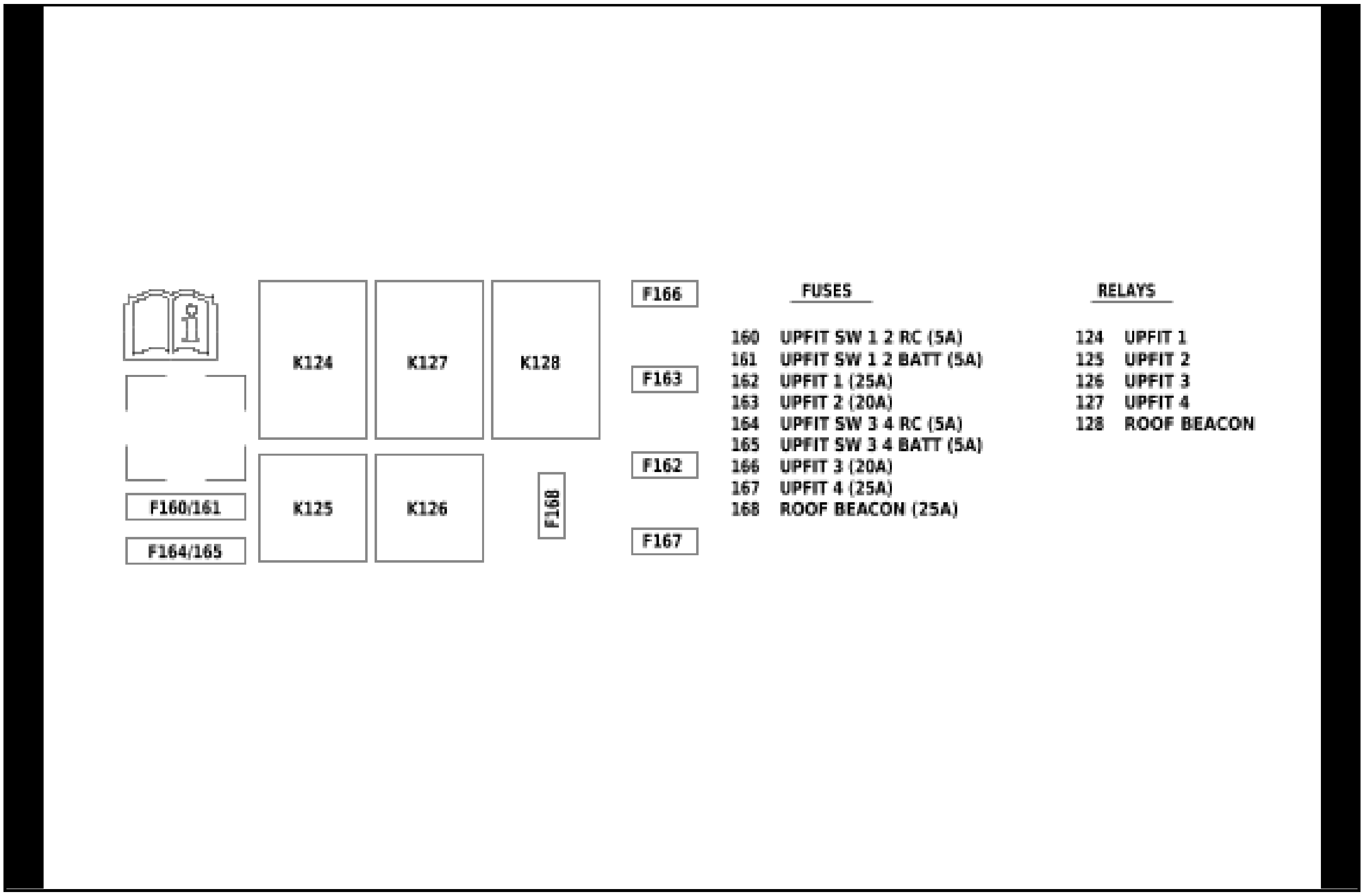
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X50E Fuse Block - Battery Auxiliary X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	RD / YE	2	Battery Positive Voltage	I	L6P
	—	RD / GN	242	Battery Positive Voltage	I	Z82- U1D

X51B Fuse Block - Instrument Panel Auxiliary Label (9L7)


K124
K127
K128
K125
K126
F160/161
F164/165
F168
F166
F163
F162
F167
FUSES
160 UPFIT SW 1 2 RC (5A)
161 UPFIT SW 1 2 BATT (5A)
162 UPFIT 1 (25A)
163 UPFIT 2 (20A)
164 UPFIT SW 3 4 RC (5A)
165 UPFIT SW 3 4 BATT (5A)
166 UPFIT 3 (20A)
167 UPFIT 4 (25A)
168 ROOF BEACON (25A)
RELAYS
124 UPFIT 1
125 UPFIT 2
126 UPFIT 3
127 UPFIT 4
128 ROOF BEACON

5357105

X51B Fuse Block - Instrument Panel Auxiliary

—

Connector Part Information

Harness Type: Battery Positive Cable Extension Cable
OEM Connector: 33323307
Service Connector: Service by Component Assembly - See Part Catalog
Description: Wire Entry Fuse Block

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-22 (RD)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required
III	Not required	Not Available	No Tool Required

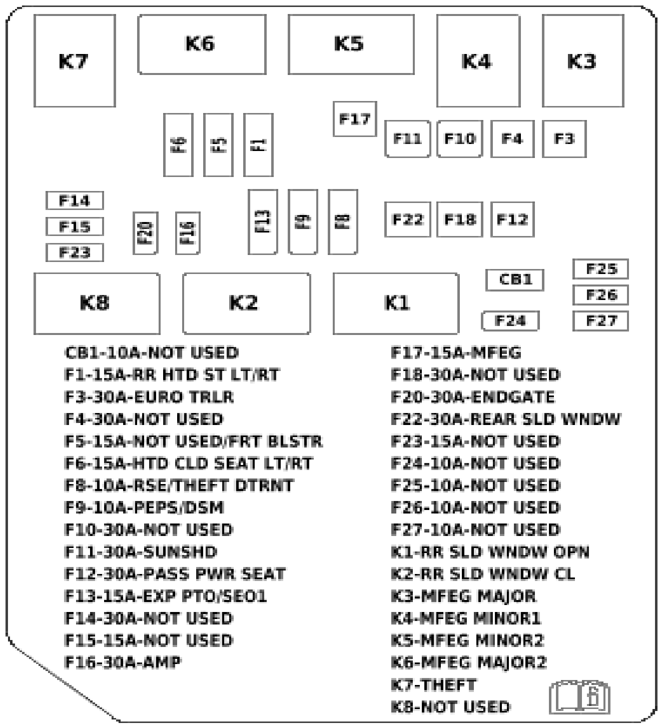
X51B Fuse Block - Instrument Panel Auxiliary

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	YE / BN	968	—	II	—
2	2.5	BU	965	—	II	—
3	2.5	GY / BK	966	—	II	—
4	2.5	BN / WH	967	—	II	—
5	2.5	OG / WH	968	—	II	—
6	2.5	BU	965	—	II	—
7	2.5	GY / BK	966	—	II	—
8	2.5	BN / WH	967	—	II	—
9	2.5	GN / BU	5989	Emergency Vehicle Lamp Relay Control	II	—
10	2.5	GN / BU	5989	Emergency Vehicle Lamp Relay Control	II	—
11	2.5	GN / BU	5989	Emergency Vehicle Lamp Relay Control	II	—
13	0.35	BU	903	—	III	—
14	0.5	WH / BK	5990	Emergency Vehicle Roof Lamp Switch Signal	II	—
15	2.5	RD / BU	42	Battery Positive Voltage	II	—
16	2.5	RD / BU	42	Battery Positive Voltage	II	—
17	0.35	BK	963	—	III	—
18	2.5	OG / WH	968	—	II	—
20	0.35	BU	903	—	II	—
21	0.35	BU	903	—	II	—
22	2.5	BN / WH	967	—	II	—
23	0.35	BK	964	—	III	—
24	2.5	RD / BU	42	Battery Positive Voltage	II	—
25	2.5	RD / BU	42	Battery Positive Voltage	II	—
26	0.35	BK	962	—	III	—
27	2.5	BU	965	—	II	—
29	0.35	RD / BU	42	Battery Positive Voltage	II	—
30	0.35	RD / BU	42	Battery Positive Voltage	III	—
31	2.5	GY / BK	966	—	II	—
32	0.35	BK	961	—	III	—
33	2.5	RD / BU	42	Battery Positive Voltage	II	—

X51B Fuse Block - Instrument Panel Auxiliary (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
34	0.5	VT / GN	39	Run/Crank Ignition 1 Voltage	II	—
35	0.5	VT / GN	39	Run/Crank Ignition 1 Voltage	II	—
36	10	RD / BU	42	Battery Positive Voltage	I	—
37	0.35	BU	903	—	III	—
38	0.35	RD / BU	42	Battery Positive Voltage	III	—
39	2.5	RD / BU	42	Battery Positive Voltage	II	—
40	2.5	RD / BU	42	Battery Positive Voltage	II	—
41	2.5	RD / BU	42	Battery Positive Voltage	II	—
42	2.5	RD / BU	42	Battery Positive Voltage	II	—
43	2.5	RD / BU	42	Battery Positive Voltage	II	—

X51L Fuse Block - Instrument Panel Left Label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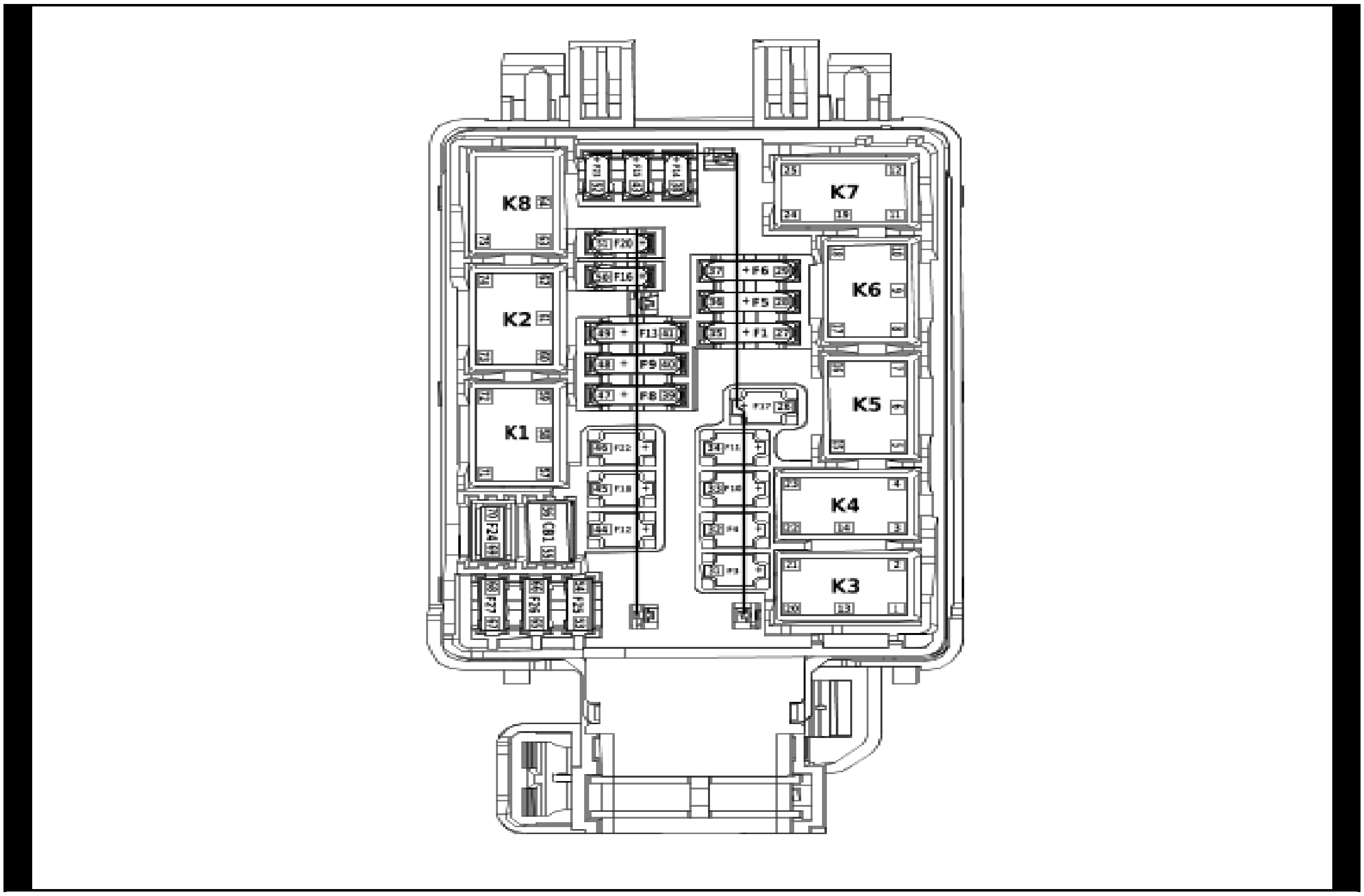
K6
K5
K4
K3
F17
F6
F5
F1
F11
F10
F4
F3
F14
F15
F23
F20
F16
F13
F9
F8
F22
F18
F12
F25
F26
F27
CB1
F24
K8
K2
K1
CB1-10A-NOT USED
F1-15A-RR HTD ST LT/RT
F3-30A-EURO TRLR
F4-30A-NOT USED
F5-15A-NOT USED/FRT BLSTR
F6-15A-HTD CLD SEAT LT/RT
F8-10A-RSE/THEFT DTRNT
F9-10A-PEPS/DSM
F10-30A-NOT USED
F11-30A-SUNSHD
F12-30A-PASS PWR SEAT
F13-15A-EXP PTO/SEO1
F14-30A-NOT USED
F15-15A-NOT USED
F16-30A-AMP
F17-15A-MFEG
F18-30A-NOT USED
F20-30A-ENDGATE
F22-30A-REAR SLD WNDW
F23-15A-NOT USED
F24-10A-NOT USED
F25-10A-NOT USED
F26-10A-NOT USED
F27-10A-NOT USED
K1-RR SLD WNDW OPN
K2-RR SLD WNDW CL
K3-MFEG MAJOR
K4-MFEG MINOR1
K5-MFEG MINOR2
K6-MFEG MAJOR2
K7-THEFT
K8-NOT USED

5233030

X51L Fuse Block - Instrument Panel Left Top View



5252577

Usage Table

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
F1	Rear Heated Seats Left/Right	F1DL	15A	• K29R Seat Heating Control Module - Rear (KA6)
F3	Not Used	F3DL	30A	• Not Used
F4	Not Used	F4DL	30A	• Not Used
F5	Not Used	F5DL	15A	• Not Used
F6	Heated and Cooled Seats Left/Right	F6DL	15A	• K29F Seat Heating Control Module - Front (KA1)
F8	Not Used	F8DL	10A	• Not Used
F9	Passive Entry/Passive Start/Driver Seat Module	F9DL	10A	• K84 Keyless Entry Control Module (BTM)
F10	Not Used	F10DL	30A	• Not Used
F11	Not Used	F11DL	30A	• Not Used
F12	Passenger Power Seat	F12DL	30A	• S64P Seat Adjuster Switch - Passenger (A7K)
F13	Export Power Take Off/Special Equipment Option 1	F13DL	15A	• K44 Power Take-Off Control Module (PTO) • X176 (PTO)
F14	Not Used	F14DL	30A	• Not Used
F15	Not Used	F15DL	15A	• Not Used

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
F16	AMP	F16DL	30A	• T3 Audio Amplifier (UQA)
F17	MFEG	F17DL	15A	• KR191L Pickup Box Endgate Latch Relay - Left (QT5) • KR192L Pickup Box Auxiliary Endgate Latch Relay - Left (QK2+QT5)
F18	Not Used	F18DL	30A	• Not Used
F20	Endgate	F20DL	30A	• K194 Pickup Box Endgate Control Module (QT6)
F22	Rear sliding window	F22DL	30A	• KR8A Sliding Rear Window Close Relay (A48) • KR8B Sliding Rear Window Open Relay (A48)
F23	Not Used	F23DL	15A	• Not Used
F24	Not Used	F24DL	10A	• Not Used
F25	Not Used	F25DL	10A	• Not Used
F26	Not Used	F26DL	10A	• Not Used
F27	Not Used	F27DL	10A	• Not Used
Circuit Breakers				
CB1	Spare	CB1DL	10A	• Not Used
Relays				
K1	Rear sliding window open	KR8B	—	• M63 Sliding Rear Window Motor (A48)
K2	Rear sliding window close	KR8A	—	• M63 Sliding Rear Window Motor (A48)
K3	MFEG Major 1	MFEG1A	—	• A99L Pickup Box Endgate Latch - Left (QK2) • A99R Pickup Box Endgate Latch - Right (QK2) • Pickup Box Endgate Latch (QK1)
K4	MFEG Minor 1	MFEG1B	—	• A99L Pickup Box Endgate Latch - Left (QK2) • A99R Pickup Box Endgate Latch - Right (QK2) • Pickup Box Endgate Latch (QK1)
K5	MFEG Minor 2	MFEG2B	—	• A100L Pickup Box Auxiliary Endgate Latch - Left (QK2) • A100R Pickup Box Auxiliary Endgate Latch - Right (QK2)
K6	MFEG Major 2	MFEG2A	—	• A100L Pickup Box Auxiliary Endgate Latch - Left (QK2) • A100R Pickup Box Auxiliary Endgate Latch - Right (QK2)
K7	Theft	—	—	• Not Used
K8	Not Used	—	—	• Not Used

X51L Fuse Block - Instrument Panel Left

—

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35232561
Service Connector: Service by Component Assembly - See Part Catalog
Description: Wire Entry Fuse Block

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575574	J-35616-5 (PU)	J-38125-215A
II	19332366	J-35616-35 (VT)	J-38125-212
III	Not required	J-35616-22 (RD)	No Tool Required

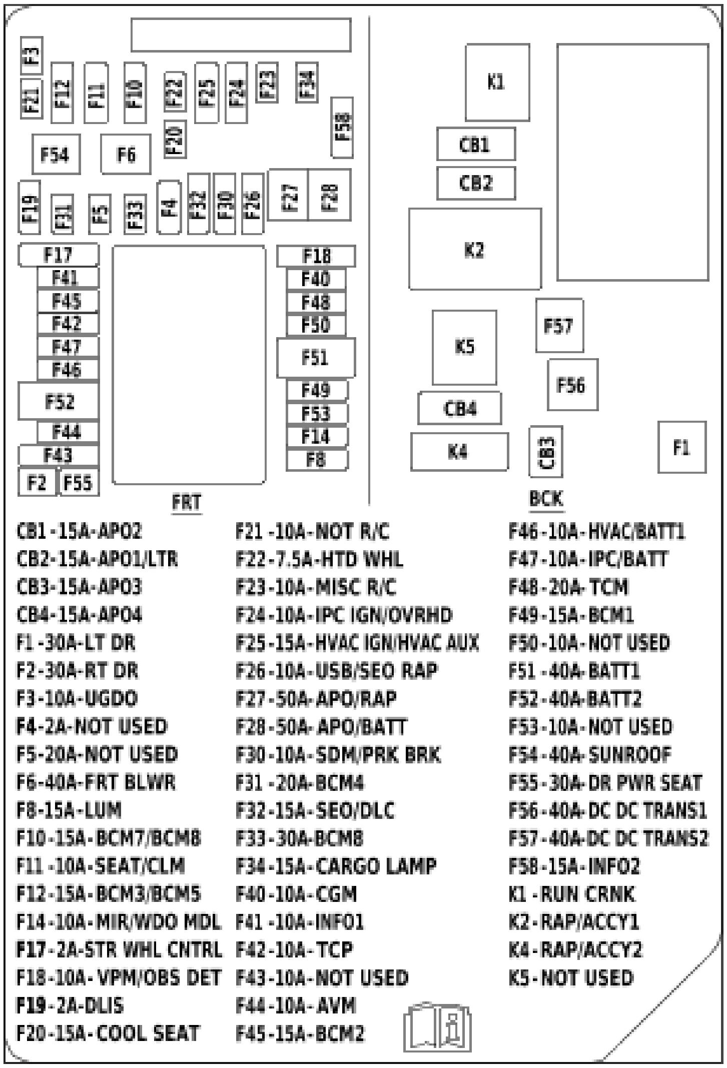
X51L Fuse Block - Instrument Panel Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH / GN	7728	Major Endgate High Relay Control	II	—
2	0.75	GN	1299	Major Endgate Motor Control	II	—
3	0.35	WH / GY	7297	Minor Endgate High Relay Control	II	—
4	0.75	VT	7725	Minor Endgate Motor Control	II	—
5	0.5	BK	1150	Ground	II	—
6	0.5	BN / YE	7727	Minor Endgate Motor Ground	II	—
7	0.35	GY / BU	7298	Minor Endgate Low Relay Control	II	—
8	0.5	BK	1150	Ground	II	—
9	0.5	BN / VT	7731	Major Endgate Motor Ground	II	—
10	0.35	BU / VT	7729	Major Endgate Low Relay Control	II	—
13	0.5	BN / VT	7731	Major Endgate Motor Ground	II	—
14	0.5	BN / YE	7727	Minor Endgate Motor Ground	II	—
15	0.5	BK	1150	Ground	II	—
16	0.75	BN / BK	7726	Minor Endgate Motor Low Reference	II	—
17	0.5	BK	1150	Ground	II	—
18	0.75	YE / BK	7730	Major Endgate Motor Low Reference	II	—
20	0.5	RD / BU	7640	Battery Positive Voltage	II	—
21	0.5	BK	1150	Ground	II	—
22	0.5	RD / BU	7640	Battery Positive Voltage	II	—
23	0.5	BK	1150	Ground	II	—
27	0.5	RD / YE	240	Battery Positive Voltage	II	—
29	0.5	RD / GN	5140	Battery Positive Voltage	II	—
30	10	RD / GY	2042	Battery Positive Voltage	III	—
35	0.5	RD / VT	340	Battery Positive Voltage	II	—
36	0.5	RD / BU	7640	Battery Positive Voltage	II	—
37	0.5	RD	6140	Battery Positive Voltage	II	—
40	0.5	RD / YE	4340	Battery Positive Voltage	II	—
41	0.5	RD / VT	2640	Battery Positive Voltage	II	—
42	10	RD / VT	2142	Battery Positive Voltage	III	—
44	2.5	RD / BN	1440	Battery Positive Voltage	I	—

X51L Fuse Block - Instrument Panel Left (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
46	2.5	RD / VT	3340	Battery Positive Voltage	I	—
49	0.5	RD / BU	4540	Battery Positive Voltage	II	—
50	2.5	RD / YE	3740	Battery Positive Voltage	II	—
51	2.5	RD / GY	7040	Battery Positive Voltage	II	—
57	2.5	RD / VT	3340	Battery Positive Voltage	II	—
58	2.5	BK	1150	Ground	II	—
59	0.5	BK	1150	Ground	II	—
60	2.5	RD / VT	3340	Battery Positive Voltage	II	—
61	2.5	BK	1150	Ground	II	—
62	0.5	BK	1150	Ground	II	—
71	0.35	YE / VT	6191	Power Rear Window Switch Open Signal	II	—
72	2	GY / GN	5441	Endgate Window Motor Down Signal	II	—
73	0.35	WH	6192	Sliding Rear Window Switch Close Signal	II	—
74	2	YE / BU	5442	Endgate Window Motor Up Signal	II	—

X51R Fuse Block - Instrument Panel Right Label


F3
F21
F12
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F34
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F5
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F4
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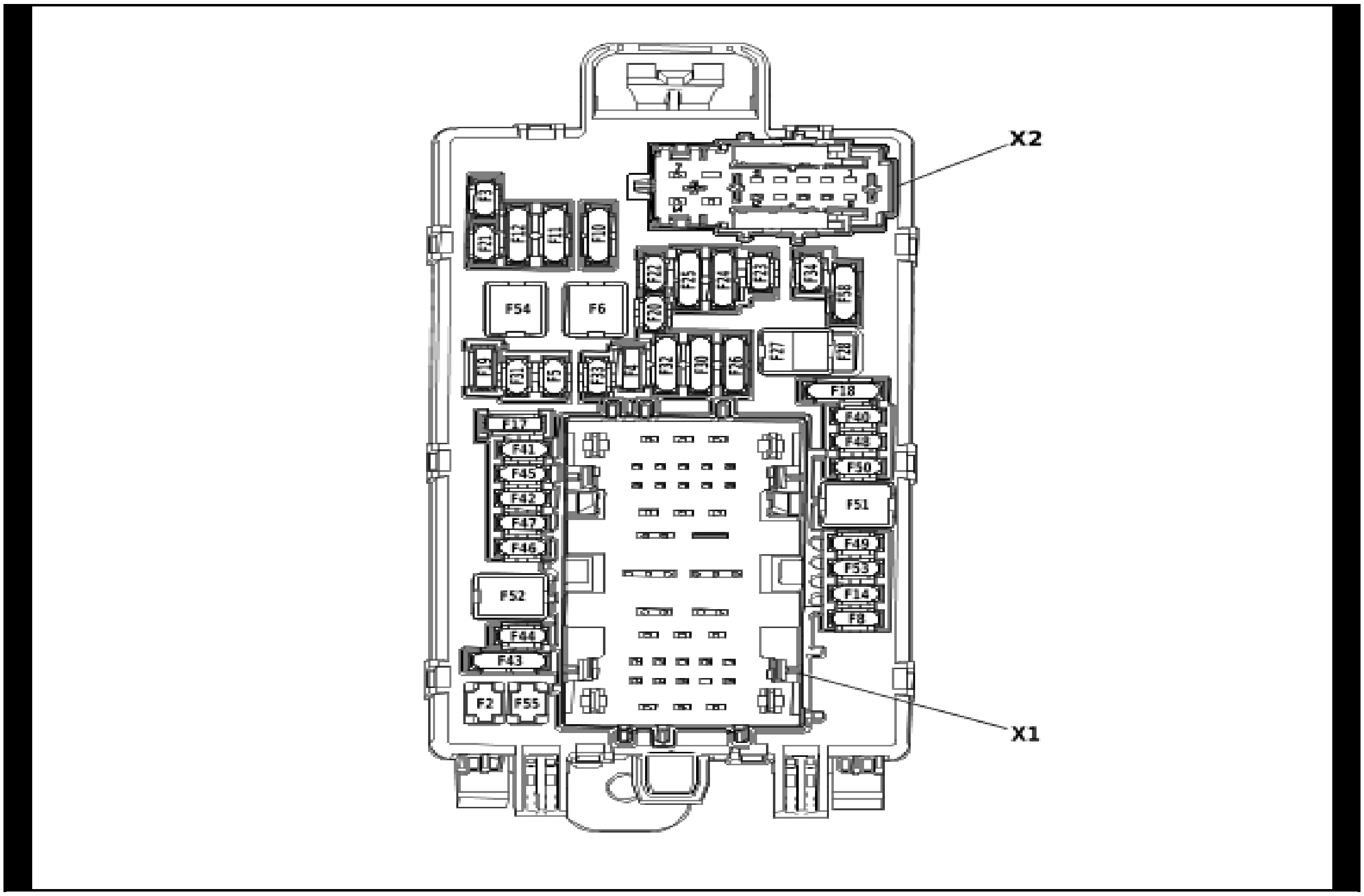
F27
F28
F17
F41
F45
F42
F47
F46
F52
F44
F43
F2
F55
F18
F40
F48
F50
F51
F49
F53
F14
F8
FRT
K1
CB1
CB2
K2
K5
F57
F56
CB4
K4
CB3
F1
BCK

CB1-15A-APO2
CB2-15A-APO1/LTR
CB3-15A-APO3
CB4-15A-APO4
F1-30A-LT DR
F2-30A-RT DR
F3-10A-UGDO
F4-2A-NOT USED
F5-20A-NOT USED
F6-40A-FRT BLWR
F8-15A-LUM
F10-15A-BCM7/BCM8
F11-10A-SEAT/CLM
F12-15A-BCM3/BCM5
F14-10A-MIR/WDO MDL
F17-2A-STR WHL CNTRL
F18-10A-VPM/OBS DET
F19-2A-DLIS
F20-15A-COOL SEAT
F21-10A-NOT R/C
F22-7.5A-HTD WHL
F23-10A-MISC R/C
F24-10A-IPC IGN/OVRHD
F25-15A-HVAC IGN/HVAC AUX
F26-10A-USB/SEO RAP
F27-50A-APO/RAP
F28-50A-APO/BATT
F30-10A-SDM/PRK BRK
F31-20A-BCM4
F32-15A-SEO/DLC
F33-30A-BCM8
F34-15A-CARGO LAMP
F40-10A-CGM
F41-10A-INFO1
F42-10A-TCP
F43-10A-NOT USED
F44-10A-AVM
F45-15A-BCM2
F46-10A-HVAC/BATT1
F47-10A-IPC/BATT
F48-20A-TCM
F49-15A-BCM1
F50-10A-NOT USED
F51-40A-BATT1
F52-40A-BATT2
F53-10A-NOT USED
F54-40A-SUNROOF
F55-30A-DR PWR SEAT
F56-40A-DC DC TRANS1
F57-40A-DC DC TRANS2
F58-15A-INFO2
K1-RUN CRNK
K2-RAP/ACCY1
K4-RAP/ACCY2
K5-NOT USED

5233032

X51R Fuse Block - Instrument Panel Right Top View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5252580

Usage Table

No.	Device Label Name	Device Assigned Name	Rating	Description
Fuses				
F1	RT DOOR	F1DR	30A	• M74D Window Motor - Driver (AXG) • S79LR Window Switch - Left Rear(AEQ)
F2	LT DOOR	F2DR	30A	• M74P Window Motor - Passenger (AEF) • S79P Window Switch - Passenger (AED)
F3	UGDO ISRVM	F3DR	10A	• A98 Front Overhead Console Assembly • E37B Dome/Reading Lamp - 2nd Row (Crew/ Extended Cab)
F4	NOT USED	F4DR	2A	• Not Used
F5	NOT USED	F5DR	20A	• Not Used
F6	FRT BLWR	F6DR	40A	• M8 Blower Motor
F8	LUMBAR	F8DR	15A	• S65D Seat Lumbar Support Switch - Driver (A2X) • S65P Seat Lumbar Support Switch - Passenger (A7K)
F10	BCM6/BCM7	F10DR	15A	• K9 Body Control Module
F11	SEAT/CLM LOCK	F11DR	10A	• F19DR (-BTM) • K40 Seat Memory Control Module (A45) • K60 Steering Column Lock Module (BTM)
F12	BCM3/BCM5	F12DR	15A	• K9 Body Control Module
F14	MIR/WDO MDL	F14DR	10A	• S146 Window/Outside Rearview Mirror Switch - Driver (AXG)

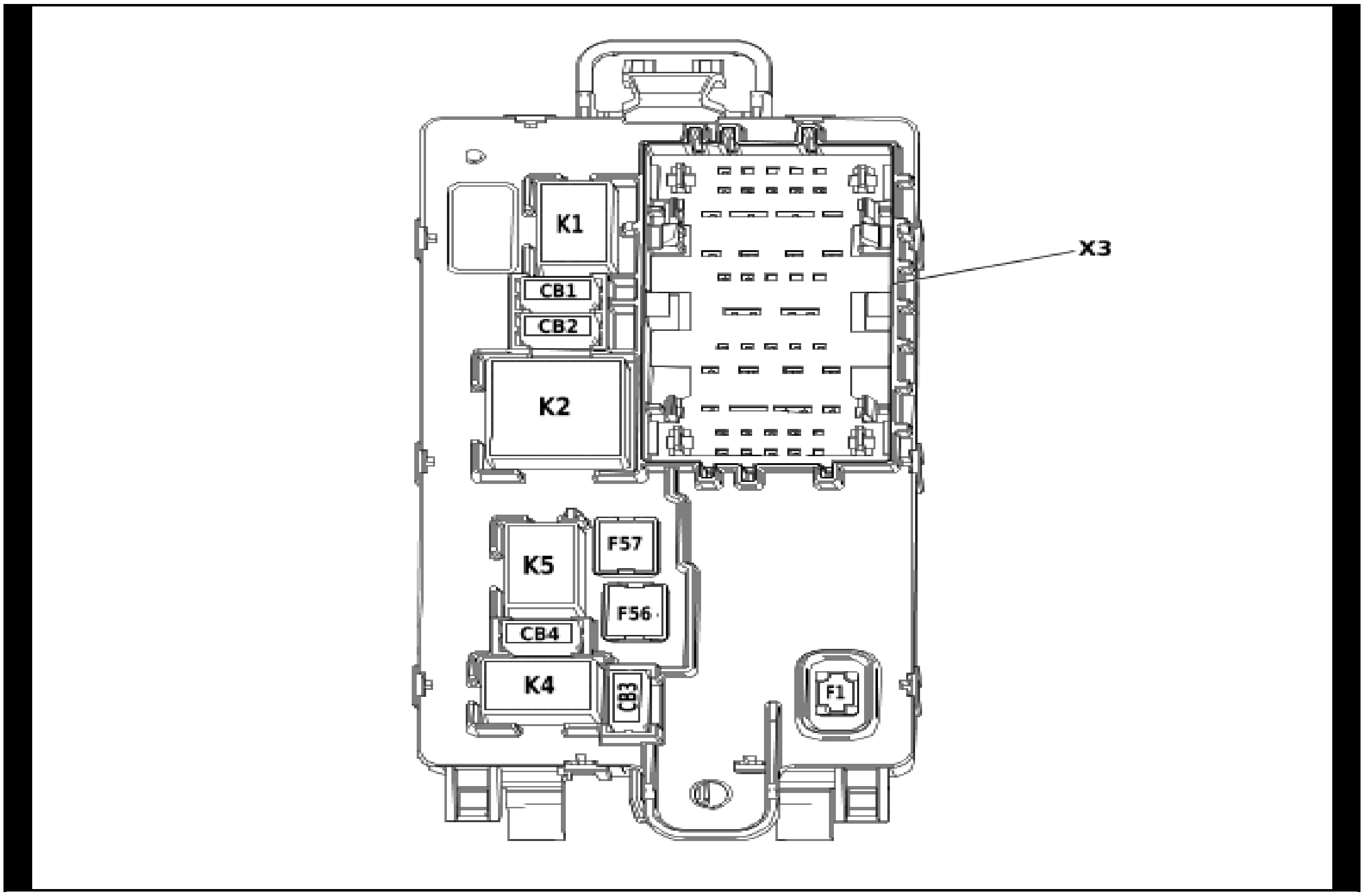
Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
F17	STR WHL CNTRL	F17DR	2A	• S70L Steering Wheel Controls Switch - Left (UK3) • S70R Steering Wheel Controls Switch - Right (UK3)
F18	VPM/OBS DET	F18DR	10A	• B174W Frontview Camera - Windshield (UEU/UHX) • K157 Video Processing Control Module (UVI/UV2) • K182 Parking Assist Control Module (UD5/UD7)
F19	DLIS	F19DR	2A	• S39 Ignition Switch (-BTM)
F20	COOL SEAT	F20DR	15A	• M73A Seat Blower Motor - Driver Back (KQV) • M73B Seat Blower Motor - Passenger Back (KQV) • M73C Seat Blower Motor - Driver Cushion (KQV) • M73D Seat Blower Motor - Passenger Cushion (KQV)
F21	NOT R/C	F21DR	10A	• K60 Steering Colmn Lock Module (BTM)
F22	HTD WHL	F22DR	7.5A	• K32 Steering Wheel Heating Control Module (KI3)
F23	MISC RC	F23DR	10A	• B87 Rearview Camera (UVC)
F24	IPC/HUD/CGM ISRVM	F24DR	10A	• A10 Inside Rearview Mirror (DD8/DRZ) • A98 Front Overhead Console Assembly • K56 Serial Data Gateway Module • P16 Instrument Cluster • P43 Collision Alert Indicators ((UHX/UEU)-UV6) • S171R Instrument Panel Center Accessory Function Switch - Right
F25	HVAC IGN	F25DR	15A	• E40 Electrical Auxiliary Heater (C32)
F26	USB/SEO RAP	F26DR	10A	• T22 Mobile Device Wireless Charger Module (K4C) • X92B USB Receptacle - Rear Seat (AZ3) ,X92C USB Receptacle Center Console Rear (D07) • X260 (L5P)
F27	APO/RAP	F27DR	50A	• CB1DR • CB2DR
F28	APO/BATT	F28DR	50A	• CB1DR • CB2DR
F30	SDM/PRK SW	F30DR	10A	• K85 Passenger Presence Module • K36 Inflatable Restraint Sensing and Diagnostic Module • S76 Trailer Brake Control Switch (JL1)
F31	BCM4	F31DR	20A	• K9 Body Control Module
F32	SEO/DLC	F32DR	10A	• X84 Data Link Connector
F33	BCM8	F33DR	30A	• K9 Body Control Module
F34	CARGO LAMP	F34DR	15A	• E2A Marker Lamp - Endgate (QT5/QT6) • E6 Center High Mounted Stop Lamp • S30 Headlamp Switch
F40	CGM	F40DR	10A	• K56 Serial Data Gateway Module
F41	INFO1	F41DR	10A	• A26 HVAC Controls • P17 Info Display Module (IOS/IOT/(IOR+UIJ)) • P29 Head-Up Display (UV6) • S32R Seat Heating Switch - Rear (KA6) • X83 Auxiliary Audio Input • X92 USB Receptacle
F42	TCP	F42DR	10A	• K73 Telematics Communication Interface Control Module (UE1)
F43	NOT USED	F43DR	10A	• Not Used

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
F44	NOT USED	F44DR	10A	• Not Used
F45	BCM2	F45DR	15A	• K9 Body Control Module
F46	HVAC/BATT1	F46DR	10A	• K33 HVAC Control Module
F47	IPC/BATT	F47DR	10A	• P16 Instrument Cluster
F48	TCM	F48DR	20A	• K71 Transmission Control Module (MGM/MGU) • Q8 Control Solenoid Valve Assembly (MYD)
F49	BCM1	F49DR	15A	• K9 Body Control Module
F50	NOT USED	F50DR	10A	• Not Used
F51	BATT1	F51DR	40A	• F18DR • F40DR • F48DR • F49DR • F58DR
F52	BATT2	F52DR	40A	• F17DR • F41DR • F42DR • F44DR • F45DR • F46DR • F47DR
F53	NOT USED	F53DR	10A	• Not Used
F54	SUNROOF	F54DR	40A	• M69 Sunroof Motor (CF5)
F55	DR PWR SEAT	F55DR	30A	• S64D Seat Adjuster Switch - Driver (A2X-A45) • K40 Seat Memory Control Module (A45)
F56	DCDC TRANS1	F56DR	40A	• Not Used
F57	DCDC TRANS2	F57DR	40A	• Not Used
F58	INFO2	F58DR	15A	• A11 Radio

X51R Fuse Block - Instrument Panel Right Bottom View



5252583

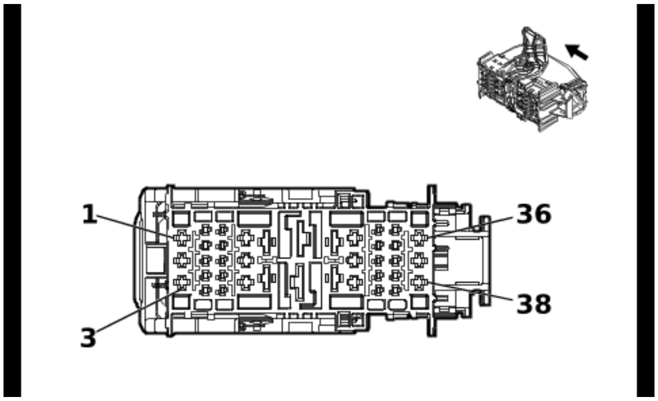
Usage Table

No.	Device Label Name	Device Assigned Name	Rating	Description
Circuit Breakers				
CB1	APO2	CB1DR	20A	• X80G Accessory Power Receptacle - Instrument Panel
CB2	APO1	CB2DR	20A	• X80L Accessory Power Receptacle - Center Console Rear (D07) • X80M Accessory Power Receptacle - Rear Seat (KPA)
CB3	APO3	CB3DR	20A	• Not Used
CB4	APO4	CB4DR	20A	• Not Used
Fuses				
F1	LT DR	F1DR	30A	• M74D Window Motor - Driver (AXG) • S79LR Window Switch - Left Rear (AEQ)
F56	DC DC TRANS1	F56DR	40A	• Not Used
F57	DC DC TRANS2	F57DR	40A	• Not Used
Relays				
K1	RUN CRANK	KR73 Ignition Main Relay	—	• F20DR • F21DR • F22DR • F23DR • F24DR • F25DR

Usage Table (cont'd)

No.	Device Label Name	Device Assigned Name	Rating	Description
K2	RAP/ACCY1	KR76A Retained Accessory Power Relay 1	—	• F26DR • F27DR
K4	RAP/ACCY2	KR76B Retained Accessory Power Relay 2	—	• CB3DR • CB4DR
K5	NOT USED	—	—	• Not Used

X51R Fuse Block - Instrument Panel Right X1



5402140

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35264615
Service Connector: 84941450
Description: 38-Way F 1.5, 2.8, 6.3 MCP, 9.5 MCON-LL Series(BU)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19332366	J-35616-35 (VT)	J-38125-212
II	19371175	J-35616-2A (GY)	EL-38125-560A
III	Not required	J-35616-22 (RD)	No Tool Required

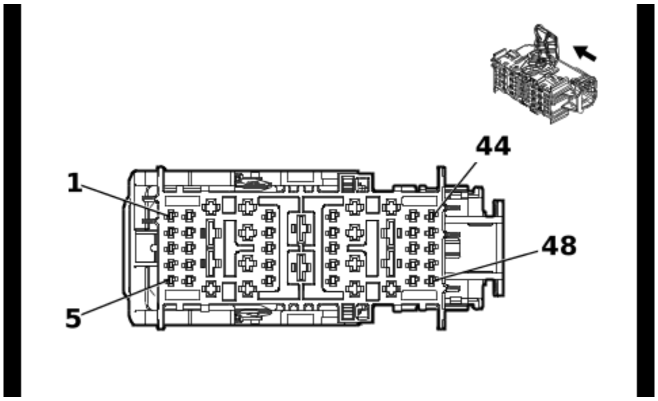
X51R Fuse Block - Instrument Panel Right X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT / WH	4939	Run/Crank Ignition 1 Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	1	RD / GN	1840	Battery Positive Voltage	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	RD / GN	4440	Battery Positive Voltage	II	—
6	0.35	VT / YE	143	Accessory Ignition Voltage	II	—
7	—	—	—	Not Occupied	—	—
8	0.35 0.35	VT / YE VT	43 4601	Accessory Ignition Voltage Retained Accessory Power Control	II	— —
9	0.35	RD / GN	3140	Battery Positive Voltage	II	—
10	0.35 0.35	GY / GN GY / VT	4083 755	Retained Accessory Power Relay 2 Coil Control Retained Accessory Power Relay Coil Control	II II	BTM - BTM
11	0.35	RD / GY	1740	Battery Positive Voltage	II	—
12	—	—	—	Not Occupied	—	—
13	0.5	VT / GN	1739	Run/Crank Ignition 1 Voltage	II	—
14	0.35	RD / BN	1140	Battery Positive Voltage	I	—
15	0.35	GN / VT	5199	Run/Crank Relay Coil Control	I	—
16	1.5	RD / WH	1040	Battery Positive Voltage	I	—
17 - 18	—	—	—	Not Occupied	—	—
19	10	RD / GY	142	Battery Positive Voltage	III	—

X51R Fuse Block - Instrument Panel Right X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
20	10	RD / WH	342	Battery Positive Voltage	III	—
21 - 22	—	—	—	Not Occupied	—	—
23	2.5	RD / BU	1842	Battery Positive Voltage	I	—
24	2.5	RD / BU	1842	Battery Positive Voltage	I	—
25	2.5	RD / WH	1340	Battery Positive Voltage	I	—
26 - 28	—	—	—	Not Occupied	—	—
29	0.35	RD / VT	1940	Battery Positive Voltage	II	—
30	0.75	RD / YE	8840	Battery Positive Voltage	II	—
31	—	—	—	Not Occupied	—	—
32	0.35	BN / WH	1429	Standing Lamp Relay Control	II	—
33 - 35	—	—	—	Not Occupied	—	—
36	2.5	RD / YE	5040	Battery Positive Voltage	I	—
37	2.5	RD / WH	1340	Battery Positive Voltage	I	—
38	—	—	—	Not Occupied	—	—

X51R Fuse Block - Instrument Panel Right X2



5403539

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35264616
Service Connector: 19371180
Description: 48-Way F 1.5, 2.8, 6.3 CTS Series(GN)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19369711	J-35616-14 (GN)	EL-38125-560A
II	84764078	J-35616-42 (RD)	J-38125-215A
III	84779405	J-35616-35 (VT)	J-38125-215A

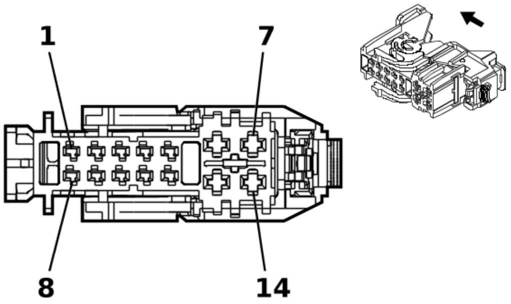
X51R Fuse Block - Instrument Panel Right X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	1050	Ground	I	—
2 - 5	—	—	—	Not Occupied	—	—
6	0.75	RD / YE	2340	Battery Positive Voltage	I	—
7	0.75	RD / YE	2340	Battery Positive Voltage	I	—
8	0.5	RD / WH	3440	Battery Positive Voltage	I	—
9	0.5 0.35	RD / GY RD / GY	4140 4140	Battery Positive Voltage Battery Positive Voltage	I I	BTM - BTM
10	0.35	BU / VT	807	Ignition Off/Accessory Ignition Voltage	I	—
11	0.5	VT / GY	539	Run/Crank Ignition 1 Voltage	III	—
12 - 13	—	—	—	Not Occupied	—	—
14	0.5	RD / BN	2940	Battery Positive Voltage	III	—
15	0.5	VT / WH	1139	Run/Crank Ignition 1 Voltage	III	—
16	0.5	RD / GN	5140	Battery Positive Voltage	III	—
17	—	—	—	Not Occupied	—	—
18	0.5	RD / GY	2140	Battery Positive Voltage	III	—
19	0.35	VT / BK	1639	Run/Crank Ignition 1 Voltage	I	—
20 - 23	—	—	—	Not Occupied	—	—
24	4	RD / VT	542	Battery Positive Voltage	II	—
25	2.5	RD / GN	3140	Battery Positive Voltage	II	—
26	—	—	—	Not Occupied	—	—

X51R Fuse Block - Instrument Panel Right X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
27	0.5	RD / WH	640	Battery Positive Voltage	I	—
28	0.35	RD / GN	5140	Battery Positive Voltage	I	—
29	0.35	RD / BU	540	Battery Positive Voltage	I	—
30	0.35	RD / GY	4140	Battery Positive Voltage	I	—
31	1.5	RD / BN	4240	Battery Positive Voltage	III	—
32	2.5	RD / VT	4040	Battery Positive Voltage	III	—
33	—	—	—	Not Occupied	—	—
34	1	RD / BU	2540	Battery Positive Voltage	III	—
35 - 36	—	—	—	Not Occupied	—	—
37	0.75	RD / BN	2240	Battery Positive Voltage	II	—
38	—	—	—	Not Occupied	—	—
39	0.35	RD / VT	3340	Battery Positive Voltage	I	—
40	0.35	RD / VT	3340	Battery Positive Voltage	I	—
41	0.35	RD / YE	3040	Battery Positive Voltage	I	—
42	0.5	RD / BU	3240	Battery Positive Voltage	I	—
43 - 44	—	—	—	Not Occupied	—	—
45	0.5	RD / WH	2740	Battery Positive Voltage	I	—
46	0.35	RD / GY	2840	Battery Positive Voltage	I	—
47	0.35	RD / WH	1340	Battery Positive Voltage	I	—
48	—	—	—	Not Occupied	—	—

X51R Fuse Block - Instrument Panel Right X3



5190115

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 33377074
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way F 1.5, 2.8 MCP Series(GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required
II	Not required	J-35616-2A (GY)	No Tool Required
III	Not required	J-35616-4A (PU)	No Tool Required

X51R Fuse Block - Instrument Panel Right X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 6	—	—	—	Not Occupied	—	—
7	0.35	RD / YE	240	Battery Positive Voltage	III	—
8	—	—	—	Not Occupied	—	—
9	0.5	WH / VT	1430	Exterior Courtesy Lamp Control	II	—
10	0.35	VT / YE	43	Accessory Ignition Voltage	I	—
11	—	—	—	Not Occupied	—	—
12	0.35	RD / GN	3140	Battery Positive Voltage	I	—
13	0.35	VT / GN	1739	Run/Crank Ignition 1 Voltage	III	—
14	0.35	VT / WH	1139	Run/Crank Ignition 1 Voltage	III	—

X54 Fuse Block - Snow Plow (VYU)

—

Connector Part Information

Harness Type: Accessory Wiring Harness
OEM Connector: 35028846
Service Connector: Service by Component Assembly - See Part Catalog
Description: Wire Entry Fuse Block

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X54 Fuse Block - Snow Plow (VYU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A4	—	BN	25	Charge Indicator Control	I	—
A6	—	GY / VT	9026	—	I	—
B4	—	GY / VT	9026	—	I	—
B5	—	BN	25	Charge Indicator Control	I	—

X55SP Fuse Holder - Snow Plow (VYU)

—

Connector Part Information

Harness Type: Snow Plow Jumper Wiring Harness
OEM Connector: 33391084
Service Connector: Service by Component Assembly - See Part Catalog
Description: Wire Entry Fuse Block

Terminal Part Information

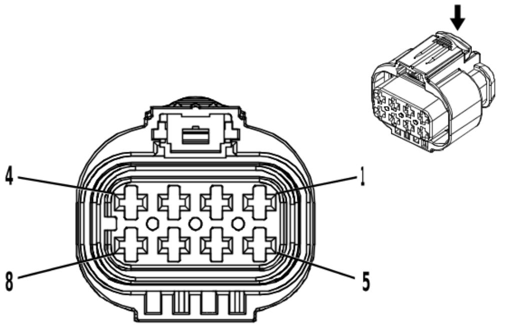
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X55SP Fuse Holder - Snow Plow (VYU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	—	I	—
A	—	OG	9026	—	I	—
B	—	OG	9028	—	I	—

Component Connector End Views

A6C Fuel Pump and Level Sensor Assembly - Primary (-(N2M/N2L))



3749582

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33180742
Service Connector: 19354078
Description: 8-Way F 2.8 Series, Sealed(L-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required

A6C Fuel Pump and Level Sensor Assembly - Primary (-(N2M/N2L))

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	GY	120	Fuel Pump Control	I	—
2	2.5	YE / GY	4137	Fuel Pump Supply Voltage Phase 2	I	—
3	2.5	WH / BN	4138	Fuel Pump Supply Voltage Phase 3	I	—
4	0.5	BN	7444	Fuel Pump Assembly Shield Ground	I	—
5	0.5	BU / VT	1589	Primary Fuel Level Sensor Signal	I	—
6	0.5	BK / GN	6281	Fuel Level Sensor Low Reference	I	—
7 - 8	—	—	—	Not Occupied	—	—

A6D Fuel Pump and Level Sensor Assembly - Secondary (N2N)

—

Connector Part Information

Harness Type: Secondary Fuel Pump
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

A6D Fuel Pump and Level Sensor Assembly - Secondary (N2N)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
5	—	BU / WH	1937	Secondary Fuel Level Sensor Signal	I	—
6	—	BK / BU	6282	Fuel Level Sensor 2 Low Reference	I	—

A9A Outside Rearview Mirror - Driver

—

Connector Part Information

Harness Type: Driver Door Wiring Harness
OEM Connector: Not Available
Service Connector: Not Available
Description: 1-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

A9A Outside Rearview Mirror - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
4	—	BU	709	Left Park Lamp Control	I	—

A9B Outside Rearview Mirror - Passenger

—

Connector Part Information

Harness Type: Door Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way

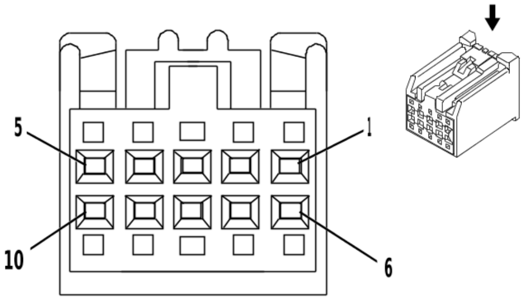
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

A9B Outside Rearview Mirror - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
4	—	BU	309	Right Park Lamp Control	I	—

A10 Inside Rearview Mirror X1 (-UEU)



2180211

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 13815336
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 Kaizen Series(BK)

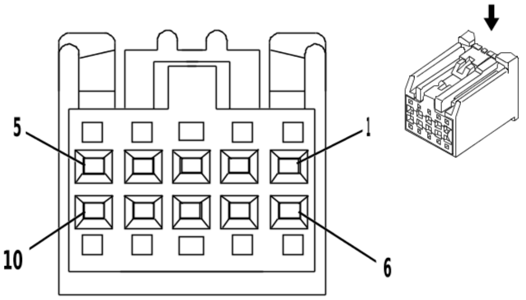
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

A10 Inside Rearview Mirror X1 (-UEU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN / WH	24	Backup Lamp Control	I	—
2	0.35	VT / WH	1139	Run/Crank Ignition 1 Voltage	I	—
3 - 4	—	—	—	Not Occupied	—	—
5	0.35	BK / WH	1851	Signal Ground	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.35	BK / YE	1691	Automatic Day/Night Mirror Low Reference	I	—
9	0.35	YE / WH	1690	Mirror Dimming Signal	I	—
10	—	—	—	Not Occupied	—	—

A10 Inside Rearview Mirror X1 (UEU)



2180211

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 13815336
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 Kaizen Series(BK)

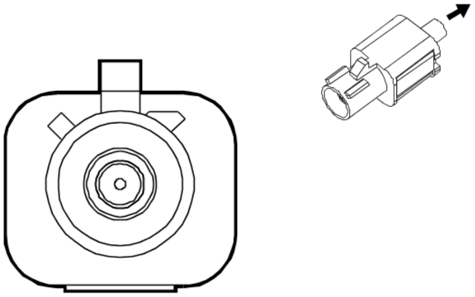
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

A10 Inside Rearview Mirror X1 (UEU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN / WH	24	Backup Lamp Control	I	—
2	0.35	VT / WH	1139	Run/Crank Ignition 1 Voltage	I	—
3 - 4	—	—	—	Not Occupied	—	—
5	0.35	BK / WH	1851	Signal Ground	I	—
6	0.35	GY / YE	6972	Rearview Camera Signal [+]	I	—
7	0.35	WH / BU	6973	Rearview Camera Signal [-]	I	—
8	0.35	BK / YE	1691	Automatic Day/Night Mirror Low Reference	I	—
9	0.35	YE / WH	1690	Mirror Dimming Signal	I	—
10	—	—	—	Not Occupied	—	—

A10 Inside Rearview Mirror X2 (DRZ)



4496217

Connector Part Information

Harness Type: Headliner Wiring Harness COAX
OEM Connector: 13594293
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way M Coax Type(BK)

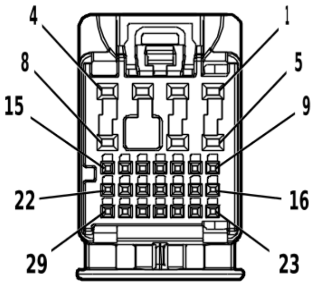
Terminal Part Information

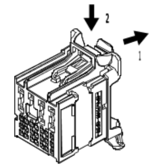
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

A10 Inside Rearview Mirror X2 (DRZ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	Coax Cable	—	Full Display Mirror Rear Camera Coaxial Video Signal	I	—

A11 Radio X1 (IOR)





4584346

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35364128
Service Connector: 13534972
Description: 29-Way F 0.5 NANO, 1.2 MCON Series(GN)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19370262	EL-35616-58 (BK)	EL-38125-58
II	84729890	J-35616-12 (BU)	J-38125-215A
III	Not required	No Tool Required	No Tool Required

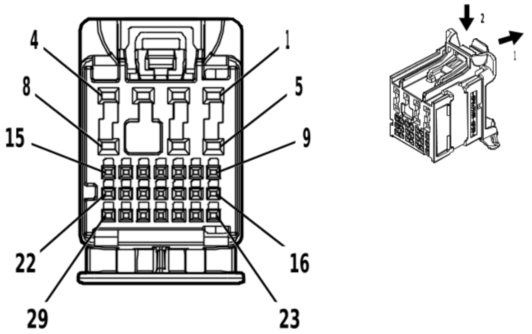
A11 Radio X1 (IOR)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD / YE	2340	Battery Positive Voltage	II	—
2	0.75	RD / YE	2340	Battery Positive Voltage	II	—
3	0.75	BK / WH	2751	Signal Ground	II	—
4	— 0.35	BU / RD BU / OG	2807 2807	Radio Keypad Voltage Reference Radio Keypad Voltage Reference	III II	— —
5	0.35	BK / GN	2804	Radio Display Backlight Low Reference	II	—
6	0.75	BK / WH	2751	Signal Ground	II	—
7	—	—	—	Not Occupied	—	—
8	0.5	GN / BK	116	Left Rear Speaker [-] Control	II	—
9	— 0.35	GY / YE GY / BU	5149 2803	Voice Recognition Audio Signal Radio Display Touch Interrupt Request Signal	III I	— —
10	—	BK / GY	5152	Voice Recognition Audio [-] Control	III	—
11	— 0.35	VT / YE GN / WH	7043 24	Microphone [+] Signal Backup Lamp Control	III I	— —
12	— 0.35	BU / BK GY / GN	7044 1102	Microphone [-] Signal Low Speed GMLAN Serial Data 2	III I	— —
13 - 14	—	—	—	Not Occupied	—	—
15	— 0.35	BU / GY GY / BU	2808 2808	Radio Keypad Dimming Control Radio Keypad Dimming Control	III I	— —
16 - 20	—	—	—	Not Occupied	—	—

A11 Radio X1 (IOR) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
21	— 0.35	GY / VT BU / VT	3363 3363	Navigation Display Dimming Control Navigation Display Dimming Control	III I	— —
22	0.35	BU / GN	2813	Radio Display Backlight Dimming Control	I	—
23	— 0.35	WH / BU VT / BU	5986 6091	Serial Data Communication Enable Crankshaft Position Sensor Replicated Signal	III I	— —
24	— 0.35	BN / WH BN / OG	2809 2809	Radio Keypad Power Signal Radio Keypad Power Signal	III I	— —
25	— 0.35	VT / WH WH / VT	2810 2810	Radio Keypad Button Signal Radio Keypad Button Signal	III I	— —
26	0.35	BU	4315	Radio Volume Up Switch Signal	I	—
27	— 0.35	GY / BN BN / GY	4314 4314	Radio Volume Down Switch Signal Radio Volume Down Switch Signal	III I	— —
28 - 29	—	—	—	Not Occupied	—	—

A11 Radio X2 (IOR)



4584398

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35364129
Service Connector: 13534973
Description: 29-Way F 0.5 NANO, 1.2 MCON, stAK50h Series(GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19370262	EL-35616-58 (BK)	EL-38125-58
II	84729890	J-35616-12 (BU)	J-38125-215A
III	Not required	No Tool Required	No Tool Required

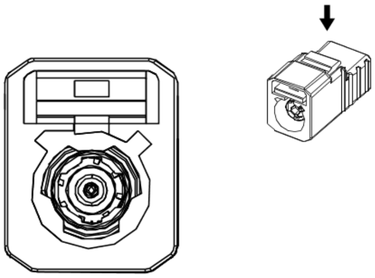
A11 Radio X2 (IOR)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN	199	Left Rear Speaker [+] Control	II	—
2	0.75	BU	201	Left Front Speaker 1 [+] Control	II	—
3	— 0.75	YE / BK YE	117 200	Right Front Speaker [-] Control 1 Right Front Speaker 1 [+] Control	III II	— —
4	0.5	BU / BK	115	Right Rear Speaker [-] Control	II	—
5	0.75	BN / BU	118	Left Front Speaker [-] Control 1	II	—
6	— 0.75	YE YE / BK	200 117	Right Front Speaker 1 [+] Control Right Front Speaker [-] Control 1	III II	— —
7	—	—	—	Not Occupied	—	—
8	0.5	WH	46	Right Rear Speaker [+] Control	II	—
9	— 0.35 0.35	BU / GN BK / BN BK / GY	1304 654 5152	High Speed GMLAN Serial Data [+] 9 Cellular Telephone Microphone Low Reference Voice Recognition Audio [-] Control	III I I	— (IOS/ IOT) - UE1 IOR+ UE1
10	— 0.35 0.35	WH / GN BU GY / YE	1305 655 5149	High Speed GMLAN Serial Data [-] 9 Cellular Telephone Microphone Signal Voice Recognition Audio Signal	III I I	— (IOS/ IOT) - UE1 IOR+ UE1
11	—	BU / GN	1304	High Speed GMLAN Serial Data [+] 9	III	—
12	— 0.35	WH / GN GY / YE	1305 6972	High Speed GMLAN Serial Data [-] 9 Rearview Camera Signal [+]	III I	— —

A11 Radio X2 (IOR) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
13	— 0.35	GN / WH WH / BU	24 6973	Backup Lamp Control Rearview Camera Signal [-]	III I	— —
14 - 17	—	—	—	Not Occupied	—	—
18	—	GY / GN	1102	Low Speed GMLAN Serial Data 2	III	—
19 - 27	—	—	—	Not Occupied	—	—
28	—	WH / BU	5986	Serial Data Communication Enable	III	—
29	—	—	—	Not Occupied	—	—

A11 Radio X3 (IOR)



Connector Part Information

Harness Type: Instrument Panel COAX Wiring Harness COAX
OEM Connector: 13581686
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Coax Type(BK)

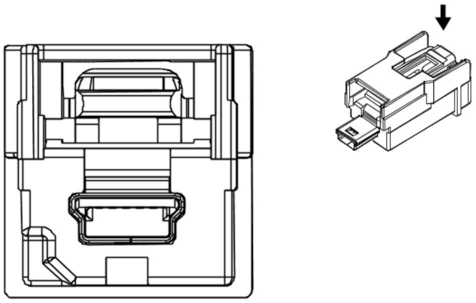
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

A11 Radio X3 (IOR)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	Coax Cable	—	(AM/FM) Antenna RF Signal	I	—

A11 Radio X4 (IOR)



2807491

Connector Part Information

Harness Type: Instrument Panel Wiring Harness USB
OEM Connector: 13946577
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 5-Way M 2.0 Mini-B USB Type(GY)

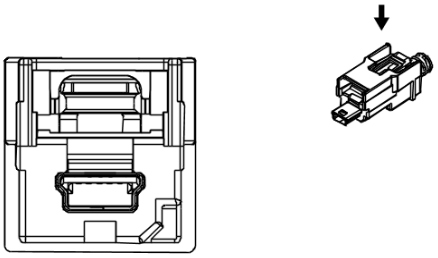
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

A11 Radio X4 (IOR)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	USB	—	USB Serial Data	I	—

A11 Radio X5 (IOR)



2807425

Connector Part Information

Harness Type: Instrument Panel Wiring Harness USB
OEM Connector: 13868727
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 5-Way M 2.0 Mini-B USB Type(BK)

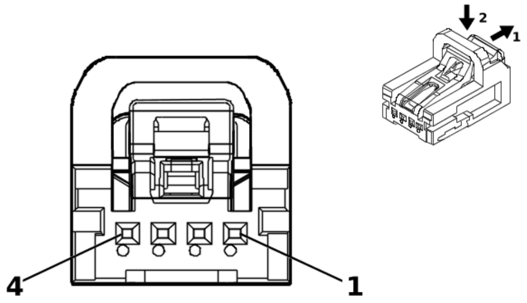
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

A11 Radio X5 (IOR)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	USB	—	USB Serial Data	I	—

A11 Radio X6 (IOR)



5200696

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35068218
Service Connector: 84769202
Description: 4-Way F Mini 50 Series(BK)

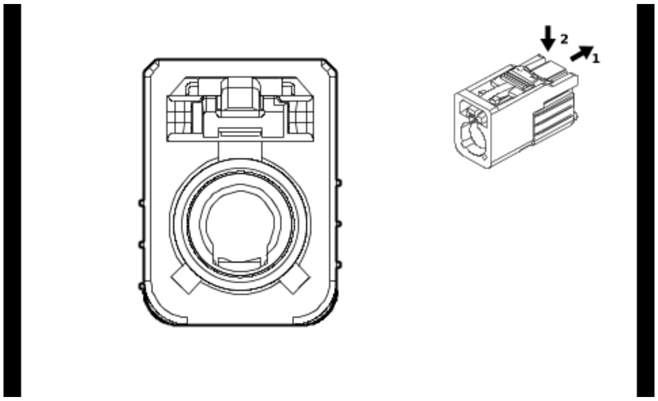
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	EL-35616-58 (BK)	No Tool Required
II	Not required	No Tool Required	No Tool Required

A11 Radio X6 (IOR)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.35	GY / WH	7211	Ethernet Bus 4 [+]	I	—
3	— 0.35	GY / BU GY	7217 7210	Ethernet Bus 7 [+] Ethernet Bus 4 [-]	II I	— —
4	—	—	—	Not Occupied	—	—

A11 Radio X8 (IOR)



5794617

Connector Part Information

Harness Type: Instrument Panel Wiring Harness COAX
OEM Connector: 33340318
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Coax Type(CU)

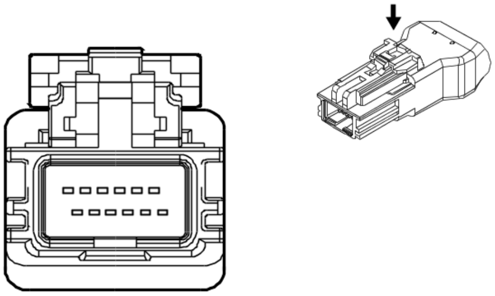
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

A11 Radio X8 (IOR)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	Coax Cable	—	(XM +/-HD) Coaxial Antenna XM Signal	I	—

A11 Radio X3 (IOS/IOT)



Connector Part Information

Harness Type: Instrument Panel LVDS Wiring Harness LVDS
OEM Connector: 35148576
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 12-Way M 2.0 HSA2 Series

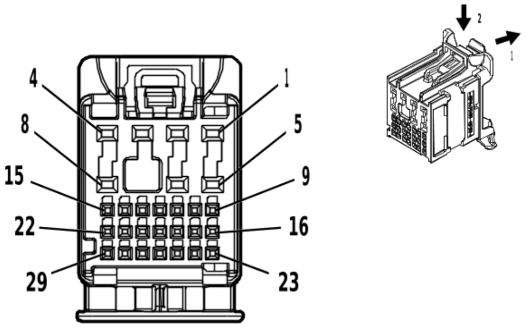
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

A11 Radio X3 (IOS/IOT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	LVDS	—	(Infotainment) Infotainment Display Signal	I	—

A11 Radio X5 (IOS/IOT)



4496253

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35364134
Service Connector: 13534974
Description: 29-Way F 0.5 NANO, 1.2 MCON, stAK50h Series(BK)

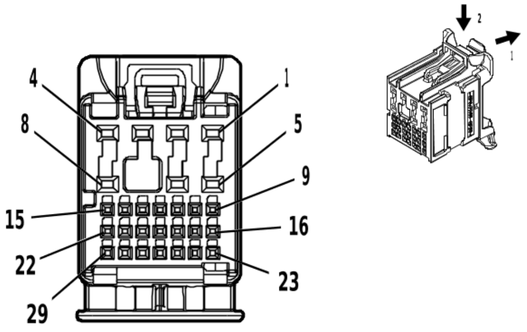
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19370262	EL-35616-58 (BK)	EL-38125-58
II	84729890	J-35616-12 (BU)	J-38125-215A

A11 Radio X5 (IOS/IOT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD / YE	2340	Battery Positive Voltage	II	—
2	0.75	RD / YE	2340	Battery Positive Voltage	II	—
3	1	BK / WH	2751	Signal Ground	II	—
4 - 5	—	—	—	Not Occupied	—	—
6	1	BK / WH	2751	Signal Ground	II	—
7	—	—	—	Not Occupied	—	—
8	0.5	GN / BK	116	Left Rear Speaker [-] Control	II	—
9	0.35 0.35	GY / YE BU	5149 655	Voice Recognition Audio Signal Cellular Telephone Microphone Signal	I I	IOR+ UE1 IOR- UE1
10	0.35 0.35	BK / GY BK / BN	5152 654	Voice Recognition Audio [-] Control Cellular Telephone Microphone Low Reference	I I	IOR+ UE1 IOR- UE1
11	0.35	VT / YE	7043	Microphone [+] Signal	I	—
12	0.35	BU / BK	7044	Microphone [-] Signal	I	—
13 - 29	—	—	—	Not Occupied	—	—

A11 Radio X6 (IOS/IOT)



4578560

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35364137
Service Connector: 13534971
Description: 29-Way F 0.5 NANO, 1.2 MCON, stAK50h Series(GY)

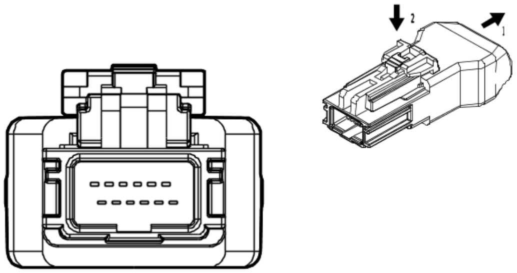
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19370262	EL-35616-58 (BK)	EL-38125-58
II	84729890	J-35616-12 (BU)	J-38125-215A
III	Not required	No Tool Required	No Tool Required

A11 Radio X6 (IOS/IOT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN	199	Left Rear Speaker [+] Control	II	—
2	0.75	BU	201	Left Front Speaker 1 [+] Control	II	—
3	0.75	YE / BK	7217	Ethernet Bus 7 [+]	II	—
4	— 0.5	BU / BK BU / BK	7216 115	Ethernet Bus 7 [-] Right Rear Speaker [-] Control	III II	— —
5	0.75	BN / BU	118	Left Front Speaker [-] Control 1	II	—
6	0.75	YE	200	Right Front Speaker 1 [+] Control	II	—
7	—	—	—	Not Occupied	—	—
8	0.5	WH	46	Right Rear Speaker [+] Control	II	—
9	— 0.35	BN / BK BU / GN	7214 1304	Ethernet Bus 6 [-] High Speed GMLAN Serial Data [+] 9	III I	— —
10	0.35	WH / GN	1305	High Speed GMLAN Serial Data [-] 9	I	—
11	0.35	GY / WH	7211	Ethernet Bus 4 [+]	I	—
12	0.35	WH / GN	7210	Ethernet Bus 4 [-]	I	—
13	0.35	GN / WH	24	Backup Lamp Control	I	—
14 - 17	—	—	—	Not Occupied	—	—
18	0.35	GY / GN	1102	Low Speed GMLAN Serial Data 2	I	—
19 - 27	—	—	—	Not Occupied	—	—
28	0.35	WH / BU	5986	Serial Data Communication Enable	I	—
29	—	—	—	Not Occupied	—	—

A11 Radio X7 (IOS/IOT)



4584321

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: VP000124
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 12-Way M 2.0 HSAL-2 Series(GY)

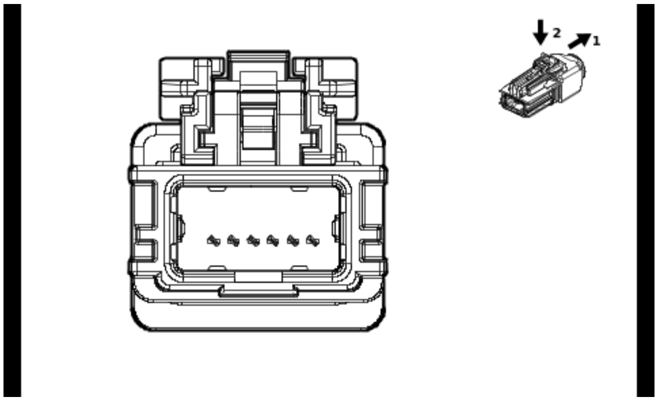
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

A11 Radio X7 (IOS/IOT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	3365	Navigation Display Low Reference	I	—
2	—	—	3366	Navigation Display Signal [+]	I	—
3	—	—	3367	Navigation Display Signal [-]	I	—
4 - 12	—	—	—	Not Occupied	—	—

A11 Radio X8 (IOS/IOT)



5987912

Connector Part Information

Harness Type: Instrument Panel Wiring Harness USB
OEM Connector: VP000221
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 12-Way M 2.0 HSAL-2 Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

A11 Radio X8 (IOS/IOT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	USB	—	USB Serial Data	I	—

A11 Radio X9 (IOS/IOT)

—

Connector Part Information

Harness Type: Instrument Panel COAX Wiring Harness
OEM Connector: 35150036
Service Connector: Service by Harness - See Part Catalog
Description: —

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

A11 Radio X9 (IOS/IOT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
YE	—	—	Coax Cable	Coax Cable	I	—

A11 Radio X9 (U2K)

—

Connector Part Information

Harness Type: Instrument Panel COAX Wiring Harness
OEM Connector: Not Available
Service Connector: Not Available
Description: 1-Way

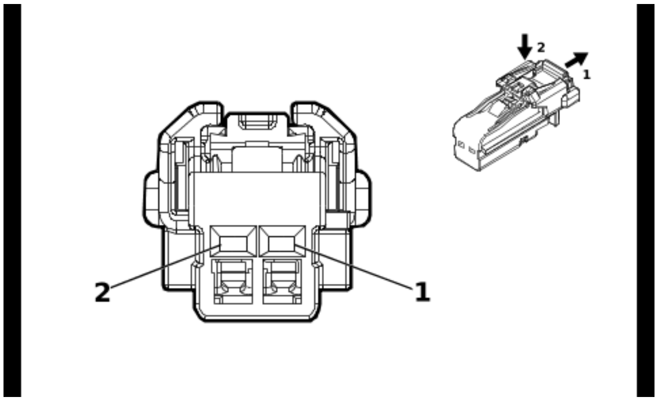
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

A11 Radio X9 (U2K)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
CU	—	—	Coax Cable	Coax Cable	I	—

A14D Seat Lumbar Support Pump - Driver



4115691

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 6098-8988
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series(BK)

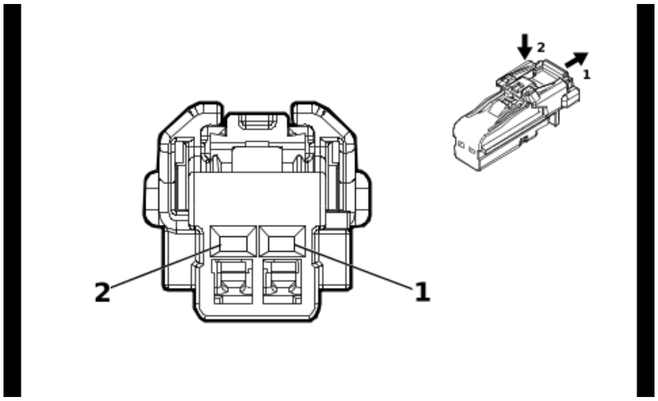
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

A14D Seat Lumbar Support Pump - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BU	611	Driver Seat Lumbar Support Motor Forward Control	I	—
2	0.75	VT	610	Driver Seat Lumbar Support Motor Backward Control	I	—

A14P Seat Lumbar Support Pump - Passenger (A7K)



4115691

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 6098-8988
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series(BK)

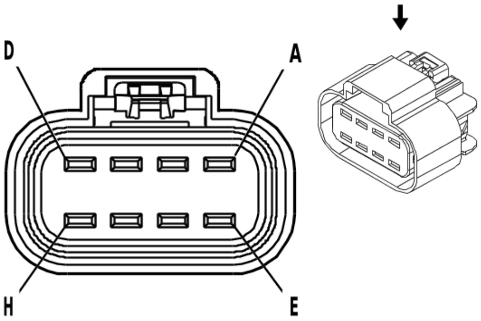
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

A14P Seat Lumbar Support Pump - Passenger (A7K)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BU	211	Passenger Seat Lumbar Support Motor Forward Control	I	—
2	0.75	VT	210	Passenger Seat Lumbar Support Motor Backward Control	I	—

A16 Transfer Case Motor (NQF)



646372

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13538370
Service Connector: 19369184
Description: 8-Way F 280 GT Series, Sealed(BK)

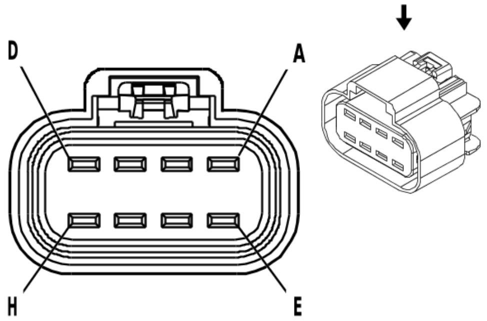
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required

A16 Transfer Case Motor (NQF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	3	YE / GY	1552	Transfer Case Motor Clockwise Control	I	—
B	0.75	BK	952	—	I	—
C	0.75	YE / BN	1569	Transfer Case Lock Solenoid Valve Control	I	—
D	3	YE / VT	1553	Transfer Case Motor Counter Clockwise Control	I	—
E	0.5	YE	7474	Incremental Encoder Direction Signal	I	—
F	0.5	BU / GY	7473	Incremental Encoder Impulse Signal	I	—
G	0.5	WH / GN	7475	Incremental Encoder Sensor Voltage Reference	I	—
H	0.5	VT	7476	Incremental Encoder Sensor Low Reference	I	—

A16 Transfer Case Motor (NQH)



646372

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13538370
Service Connector: 19369184
Description: 8-Way F 280 GT Series, Sealed(BK)

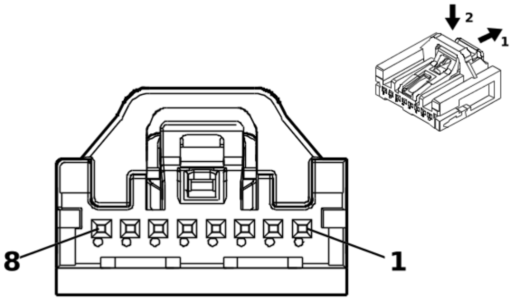
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required

A16 Transfer Case Motor (NQH)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	3	YE / GY	1552	Transfer Case Motor Clockwise Control	I	—
B	0.75	BK	952	—	I	—
C	0.75	YE / BN	1569	Transfer Case Lock Solenoid Valve Control	I	—
D	3	YE / VT	1553	Transfer Case Motor Counter Clockwise Control	I	—
E	0.5	YE	7474	Incremental Encoder Direction Signal	I	—
F	0.5	BU / GY	7473	Incremental Encoder Impulse Signal	I	—
G	0.5	WH / GN	7475	Incremental Encoder Sensor Voltage Reference	I	—
H	0.5	VT	7476	Incremental Encoder Sensor Low Reference	I	—

A22 Radio Controls (UIR)



5200269

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35068228
Service Connector: 84769201
Description: 8-Way F Mini 50 Series(BK)

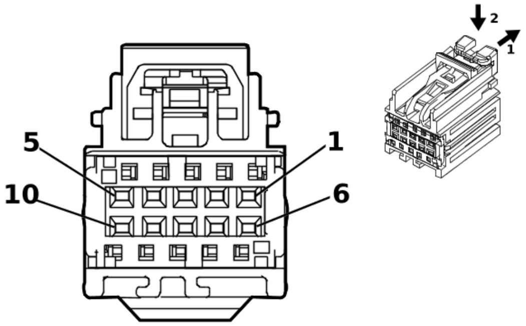
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	EL-35616-58 (BK)	No Tool Required

A22 Radio Controls (UIR)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BU / RD	2807	Radio Keypad Voltage Reference	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	BN / WH	2809	Radio Keypad Power Signal	I	—
4	0.35	BK / YE	2806	Radio Keypad Low Reference	I	—
5	0.35	BU / GY	2808	Radio Keypad Dimming Control	I	—
6	0.35	VT / WH	2810	Radio Keypad Button Signal	I	—
7	0.35	BU / BK	4315	Radio Volume Up Switch Signal	I	—
8	0.35	GY / BN	4314	Radio Volume Down Switch Signal	I	—

A23D Door Latch Assembly - Driver



Connector Part Information

Harness Type: Driver Door Wiring Harness
OEM Connector: 33320811
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 Kaizen Series(GN)

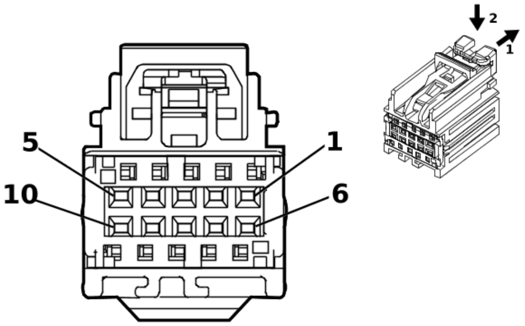
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

A23D Door Latch Assembly - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	PK	745	Left Front Door Ajar Switch Signal	I	—
2	0.5	WH / YE	3574	Driver Door Open Switch Signal	I	—
3	0.75	BK	1150	Ground	I	—
4	0.35	WH / VT	3270	Driver Door Lock Motor Status Signal	I	—
5	0.5	BU / VT	1124	Door Lock Key Switch Unlock Signal	I	—
6	—	—	—	Not Occupied	—	—
7	0.75	GY	5911	Door Lock Actuator Lock Control 2	I	—
8	0.75	BN / YE	294	Door Lock Actuator Unlock Control	I	—
9 - 10	—	—	—	Not Occupied	—	—

A23LR Door Latch Assembly - Left Rear



4622549

Connector Part Information

Harness Type: Left Rear Door Wiring Harness
OEM Connector: 33320811
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 Kaizen Series(GN)

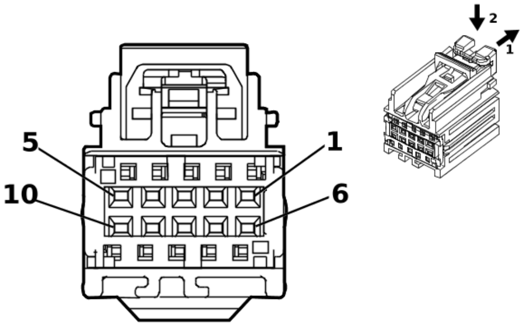
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

A23LR Door Latch Assembly - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY	747	Left Rear Door Ajar Switch Signal	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	BK	1150	Ground	I	—
4 - 6	—	—	—	Not Occupied	—	—
7	0.75	GY	295	Door Lock Actuator Lock Control	I	—
8	0.75	BN / YE	294	Door Lock Actuator Unlock Control	I	—
9 - 10	—	—	—	Not Occupied	—	—

A23P Door Latch Assembly - Passenger



4622549

Connector Part Information

Harness Type: Passenger Door Wiring Harness
OEM Connector: 33320811
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 Kaizen Series(GN)

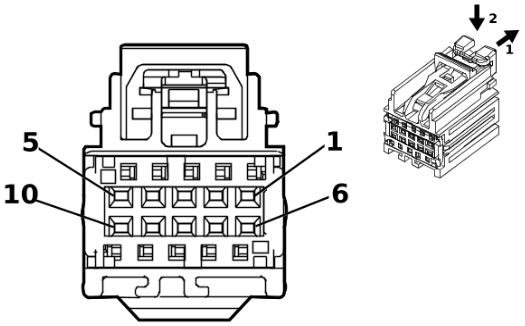
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

A23P Door Latch Assembly - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.75	BK	1250	Ground	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	GY	746	Right Front Door Ajar Switch Signal	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.75	BN / YE	294	Door Lock Actuator Unlock Control	I	—
9	0.75	GY	295	Door Lock Actuator Lock Control	I	—
10	—	—	—	Not Occupied	—	—

A23RR Door Latch Assembly - Right Rear



4622549

Connector Part Information

Harness Type: Right Rear Door Wiring Harness
OEM Connector: 33320811
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 0.64 Kaizen Series(GN)

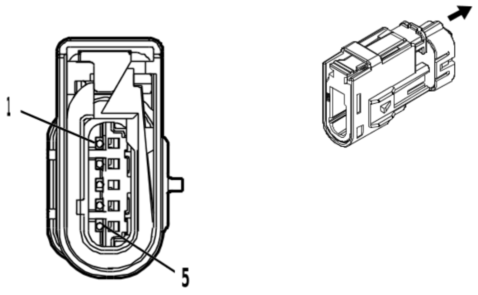
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

A23RR Door Latch Assembly - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	BK	1250	Ground	I	—
4	—	—	—	Not Occupied	—	—
5	0.5	GN	748	Right Rear Door Ajar Switch Signal	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.75	BN / YE	294	Door Lock Actuator Unlock Control	I	—
9	0.75	GY	295	Door Lock Actuator Lock Control	I	—
10	—	—	—	Not Occupied	—	—

A24D Door Handle Assembly - Driver Exterior (BTM)



4808321

Connector Part Information

Harness Type: Driver Door Wiring Harness
OEM Connector: 35028909
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M 1.2 Series, Sealed(NA)

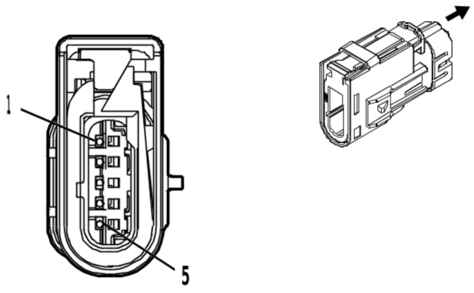
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

A24D Door Handle Assembly - Driver Exterior (BTM)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN / WH	3570	Driver Door Handle Switch Signal	I	—
2	0.5	VT	3560	Driver Door Passive Entry Antenna High Signal	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	VT / GY	3561	Driver Door Passive Entry Antenna Low Signal	I	—
5	0.75	BK	1150	Ground	I	—

A24LR Door Handle Assembly - Left Rear Exterior (BTM)



4808325

Connector Part Information

Harness Type: Left Rear Door Wiring Harness
OEM Connector: 35028907
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M 1.2 Series, Sealed(BK)

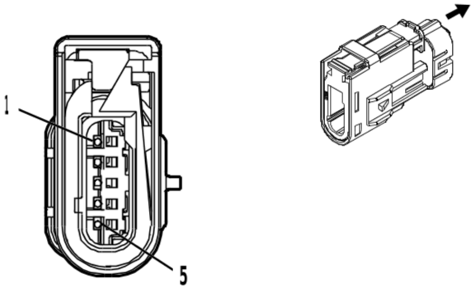
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

A24LR Door Handle Assembly - Left Rear Exterior (BTM)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	PK	6157	Left Rear Door Handle Switch Signal	I	—
2 - 4	—	—	—	Not Occupied	—	—
5	0.75	BK	1150	Ground	I	—

A24P Door Handle Assembly - Passenger Exterior (BTM)



4808321

Connector Part Information

Harness Type: Passenger Door Wiring Harness
OEM Connector: 35028909
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M 1.2 Series, Sealed(NA)

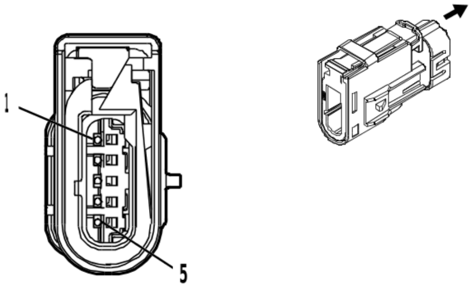
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

A24P Door Handle Assembly - Passenger Exterior (BTM)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT / WH	3571	Passenger Door Handle Switch Signal	I	—
2	0.5	GN / YE	3562	Passenger Door Passive Entry Antenna High Signal	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	GN / BK	3563	Passenger Door Passive Entry Antenna Low Signal	I	—
5	0.75	BK	1250	Ground	I	—

A24RR Door Handle Assembly - Right Rear Exterior (BTM)



4808325

Connector Part Information

Harness Type: Right Rear Door Wiring Harness
OEM Connector: 35028907
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M 1.2 Series, Sealed(BK)

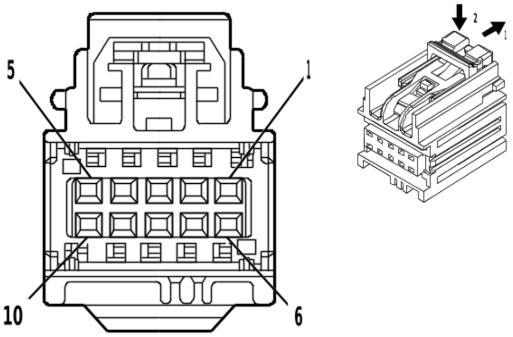
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

A24RR Door Handle Assembly - Right Rear Exterior (BTM)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE / GY	6158	Right Rear Door Handle Switch Signal	I	—
2 - 4	—	—	—	Not Occupied	—	—
5	0.75	BK	1250	Ground	I	—

A26 HVAC Controls



4822741

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 33353271
Service Connector: 13509648
Description: 10-Way F 0.64 Kaizen Series(BK)

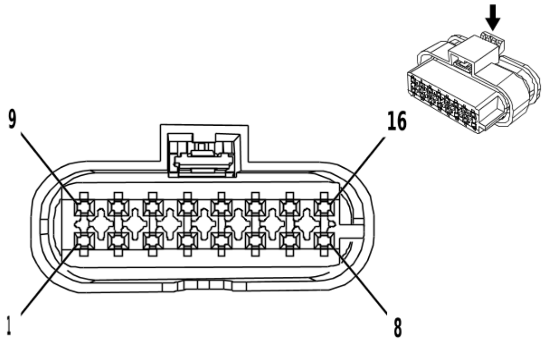
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19300629	J-35616-64B (L-BU)	J-38125-215A

A26 HVAC Controls

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD / WH	1340	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
4 - 8	—	—	—	Not Occupied	—	—
9	0.35	GN / YE	7531	HVAC Control Module LIN Bus 1	I	—
10	0.5	BK / WH	1851	Signal Ground	I	—

A38 Reductant Pump and Sensor Assembly (L5P)



4259227

Connector Part Information

Harness Type: DEF Tank Wiring Harness
OEM Connector: 33210848
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 1.2 MLK Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

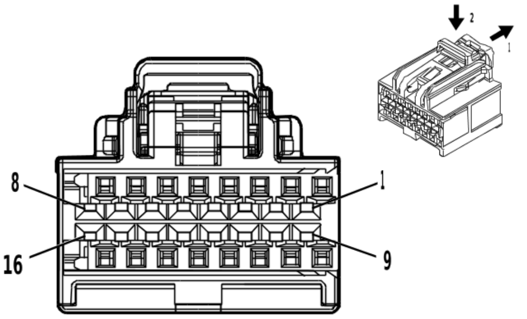
A38 Reductant Pump and Sensor Assembly (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	3244	Diesel Exhaust Fluid Tank Temperature Sensor Signal	I	—
2	—	BN	3245	Diesel Exhaust Fluid Tank Temperature Sensor Low Reference	I	—
3	—	BU	3107	Diesel Exhaust Fluid Pressure Sensor Low Reference	I	—
4	—	BU	3108	Diesel Exhaust Fluid Pressure Sensor Signal	I	—
5	—	BN	3106	Diesel Exhaust Fluid Pressure Sensor 5 Volt Reference	I	—
6	—	BU	4138	Tank Heater 1 Ground	I	LATE BUILD
7	—	WH	3103	Diesel Exhaust Fluid Smart Pump Control	I	—
8	—	BN	3875	Diesel Exhaust Fluid Smart Pump Supply Voltage Phase 2	I	—
9	—	YE	3677	Diesel Exhaust Fluid Reservoir Heater Control	I	—
10	— —	BN BN	3676 3676	Diesel Exhaust Fluid Heating Tank 2 Heater Control Diesel Exhaust Fluid Heating Tank 2 Heater Control	I I	— EARLY BUILD
11	—	BU	4138	Tank Heater 1 Ground	I	EARLY BUILD
12	—	BN	3676	Diesel Exhaust Fluid Heating Tank 2 Heater Control	I	LATE BUILD
13	—	—	—	Not Occupied	—	—
14	—	BU	2937	Diesel Exhaust Fluid Pump Motor Stator Low Reference	I	—

A38 Reductant Pump and Sensor Assembly (L5P) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
15	— — —	BN BN YE	2936 2936 3876	Diesel Exhaust Fluid Heating Tank 2 Heater Control Low Diesel Exhaust Fluid Heating Tank 2 Heater Control Low Pump Phase C	I I I	EARLT BUILD EARLY BUILD LATE BUILD
16	— — —	YE YE BN	3876 3876 2936	Diesel Exhaust Fluid Smart Pump Supply Voltage Phase 3 Diesel Exhaust Fluid Smart Pump Supply Voltage Phase 3 Tank Heater 2 Ground	I I I	EARLT BUILD EARLY BUILD LATE BUILD

A98 Front Overhead Console Assembly X1



4873254

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 35016344
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 0.64 OCS Series(GY)

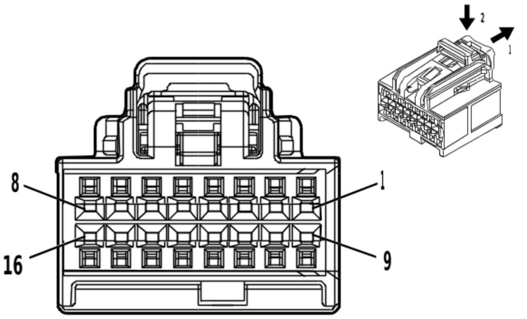
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

A98 Front Overhead Console Assembly X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	157	Interior Lamp Control	I	—
2	0.5	WH / BN	6815	Inadvertent Load Control	I	—
3	0.35	WH	6816	Indicator Dimming Control	I	—
4	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
5	0.35	BK	1050	Ground	I	—
6	0.35	BU	2307	Passenger Air Bag On Indicator Control	I	—
7	0.35	GN	2308	Passenger Air Bag Off Indicator Control	I	—
8	0.35	VT / WH	1139	Run/Crank Ignition 1 Voltage	I	—
9	0.35	VT / WH	5234	Passenger Seat Belt Indicator Control	I	—
10	0.35	GY	156	Courtesy Lamp Switch Signal	I	—
11	0.35	GY / GN	328	Interior Lamp Defeat Switch Signal	I	—
12	0.35	BK / WH	1851	Signal Ground	I	—
13	0.35	BU / GY	4672	Dome Lamp Off Indicator Control	I	—
14	0.35	VT / GN	7558	Front Footwell Accent Lighting Control	I	—
15 - 16	—	—	—	Not Occupied	—	—

A98 Front Overhead Console Assembly X2



4873243

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 35016343
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 0.64 OCS Series(BK)

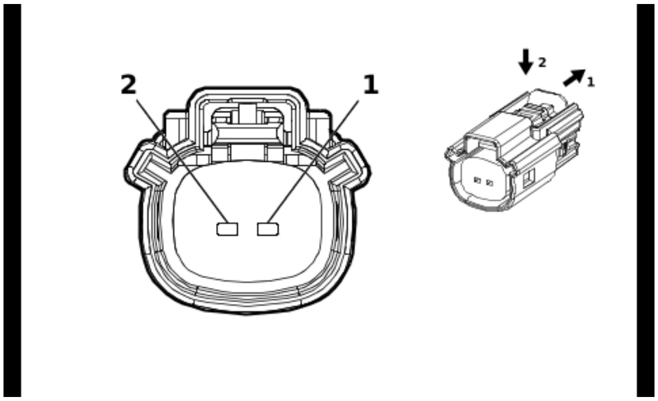
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

A98 Front Overhead Console Assembly X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE / VT	2516	Telematics Switch Green LED Indicator Control	I	—
2	0.35	BN / WH	2517	Telematics Switch Red LED Indicator Control	I	—
3	0.35	GN / WH	2514	Telematics Switch Signal	I	—
4	0.35	GN / BK	2515	Telematics Switch Supply Voltage	I	—
5	0.35	YE / VT	6191	Power Rear Window Switch Open Signal	I	—
6	0.35	WH	6192	Sliding Rear Window Switch Close Signal	I	—
7	0.35	VT / YE	43	Accessory Ignition Voltage	I	—
8	0.35	RD / YE	240	Battery Positive Voltage	I	—
9	0.35	BU / VT	5027	Sunroof Switch Serial Data 1 Signal	I	—
10	0.35	WH / GN	3031	Sunroof Vent Switch Signal	I	—
11	0.35	BK / GY	128	Sunroof Switch Low Reference	I	—
12 - 16	—	—	—	Not Occupied	—	—

A99C Pickup Box Endgate Latch - Center (QK1)



2474713

Connector Part Information

Harness Type: Endgate Wiring Harness
OEM Connector: 13782480
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.5 MX Series, Sealed(BK)

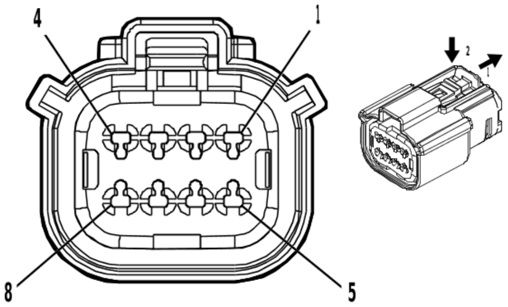
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

A99C Pickup Box Endgate Latch - Center (QK1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GN	1299	Major Endgate Motor Control	I	—
2	0.75	YE / BK	7730	Major Endgate Motor Low Reference	I	—

A99L Pickup Box Endgate Latch - Left (QT6)



4846407

Connector Part Information

Harness Type: Endgate Wiring Harness
OEM Connector: 35037827
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 1.5 MX Series, Sealed(BK)

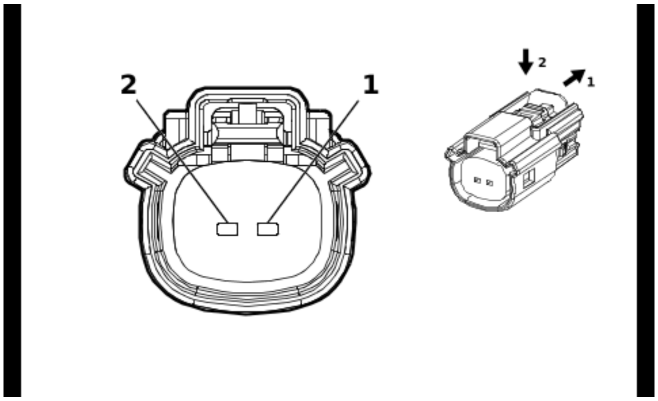
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	No Tool Required	No Tool Required

A99L Pickup Box Endgate Latch - Left (QT6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	GN	1299	Major Endgate Motor Control	II	—
2	0.35	GY / VT	4678	Rear Closure Latch Unlatch Status	I	—
3	0.35	BU / BK	4665	Rear Closure Latch Ratchet Status	I	—
4	0.35	BK / VT	4656	Rear Closure Object Sensor Low Reference	I	—
5	1	BN	4681	Rear Closure Cinch Latch Motor Cinch Control	I	—
6	1	BU / GY	4682	Rear Closure Cinch Latch Motor Release Control	I	—
7	0.35	GN / BK	4659	Rear Closure Open Switch Signal	I	—
8	0.35	PK / BK	4668	Rear Closure Latch Pawl Status Signal	I	—

A99R Pickup Box Endgate Latch - Right (QK2)



2474713

Connector Part Information

Harness Type: Endgate Wiring Harness
OEM Connector: 13782480
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.5 MX Series, Sealed(BK)

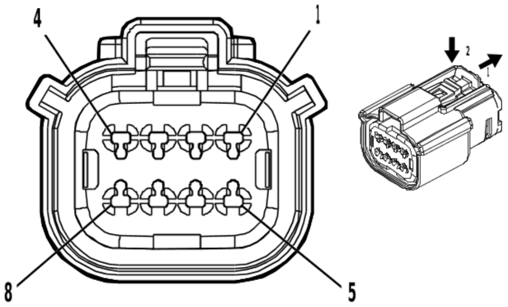
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

A99R Pickup Box Endgate Latch - Right (QK2)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GN	1299	Major Endgate Motor Control	I	—
2	0.75	YE / BK	7730	Major Endgate Motor Low Reference	I	—

A99R Pickup Box Endgate Latch - Right (QT6)



4846407

Connector Part Information

Harness Type: Endgate Wiring Harness
OEM Connector: 35037827
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 1.5 MX Series, Sealed(BK)

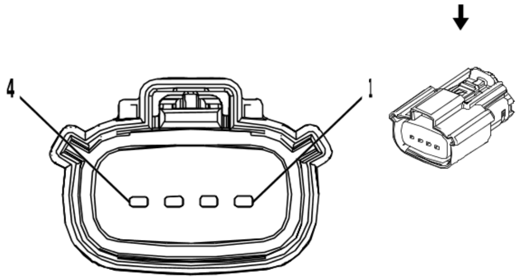
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

A99R Pickup Box Endgate Latch - Right (QT6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY / BK	1575	Rear Closure Sensor Low Reference 2	I	—
2	0.35	YE / RD	7734	Rear Closure Latch 2 Ratchet Status Signal	I	—
3	0.35	VT	7736	Rear Closure Latch 2 Unlatch Status Signal	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	WH	7735	Rear Closure Latch 2 Pawl Status Signal	I	—
6	0.35	BU	7733	Rear Closure Latch 2 Sector Status Signal	I	—
7	1	PK	1499	Rear Closure Cinch Latch Motor 2 Cinch Control	I	—
8	1	BU	1509	Rear Closure Cinch Latch Motor 2 Release Control	I	—

A100L Pickup Box Auxiliary Endgate Latch - Left (QK2/QT5)



2474747

Connector Part Information

Harness Type: Endgate Wiring Harness
OEM Connector: 13815807
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 1.5 MX Series, Sealed(BK)

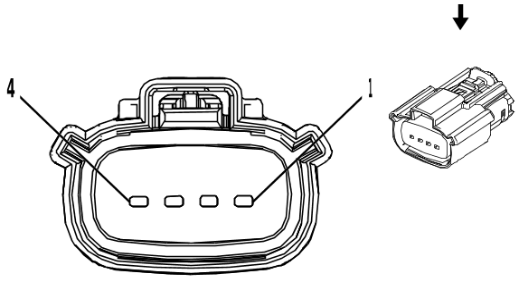
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

A100L Pickup Box Auxiliary Endgate Latch - Left (QK2/QT5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE / BU	7295	Left Minor Endgate Ajar Signal	I	—
2	0.75	BK	1450	Ground	I	—
3	0.75	BN / BK	7726	Minor Endgate Motor Low Reference	I	—
4	0.75	VT	7725	Minor Endgate Motor Control	I	—

A100R Pickup Box Auxiliary Endgate Latch - Right (QK2/QT5)



2474747

Connector Part Information

Harness Type: Endgate Wiring Harness
OEM Connector: 13815807
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 1.5 MX Series, Sealed(BK)

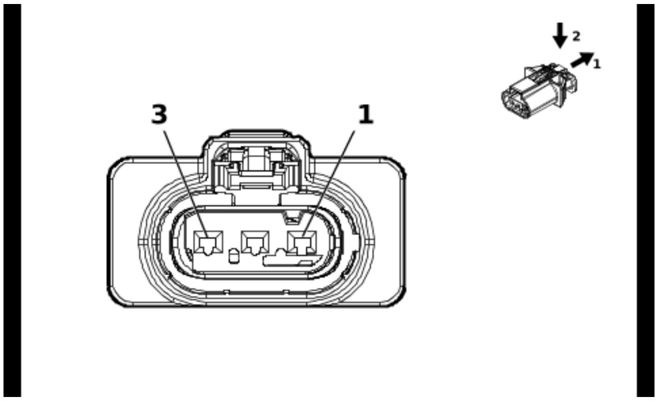
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	No Tool Required	No Tool Required

A100R Pickup Box Auxiliary Endgate Latch - Right (QK2/QT5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN / BK	7726	Minor Endgate Motor Low Reference	I	—
2	0.75	VT	7725	Minor Endgate Motor Control	I	—
3	—	WH / BN	7296	Right Minor Endgate Ajar Signal	II	—
4	—	BK	1450	Ground	II	—

B1 A/C Refrigerant Pressure Sensor



5877159

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 35242152
Service Connector: 85596544
Description: 3-Way F 1.2 MLK Series, Sealed(BK)

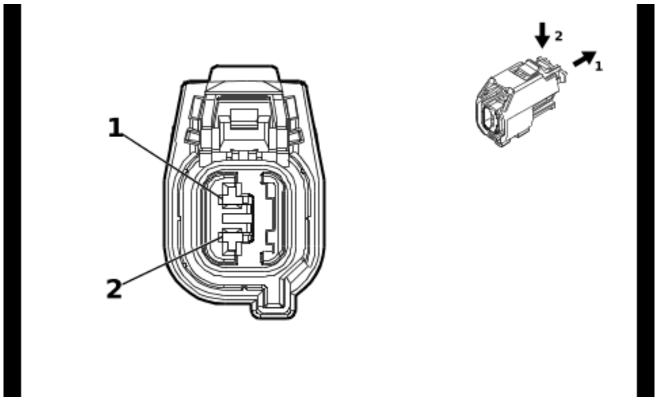
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B1 A/C Refrigerant Pressure Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5 0.5	BN / RD BU / RD	2700 460	A/C Pressure Sensor 5V Reference Engine Control Sensors 5 Volt Reference 1	I I	L5P+ (CJ2/ C67) L8T+ (CJ2/ C67)
2	0.5	GN	380	A/C Refrigerant Pressure Sensor Signal	I	—
3	0.5 0.5	BK / BN BK / GY	5514 626	A/C Refrigerant Pressure Sensor Low Reference Engine Control Vehicle Sensors Low Reference 1	I I	L5P+ (CJ2/ C67) L8T+ (CJ2/ C67)

B5LF Wheel Speed Sensor - Left Front



5666214

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33189092
Service Connector: 85526683
Description: 2-Way F 1.5 OCS Series, Sealed(GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

B5LF Wheel Speed Sensor - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY / WH	7064	Left Front Wheel Speed Sensor Control	I	—
2	0.5	GY	830	Left Front Wheel Speed Sensor Signal	I	—

B5LR Wheel Speed Sensor - Left Rear

—

Connector Part Information

Harness Type: Chassis Rear Wiring Harness Extension Harness
OEM Connector: 85564682
Service Connector: Service by Harness - See Part Catalog
Description: Wheel Speed Sensor

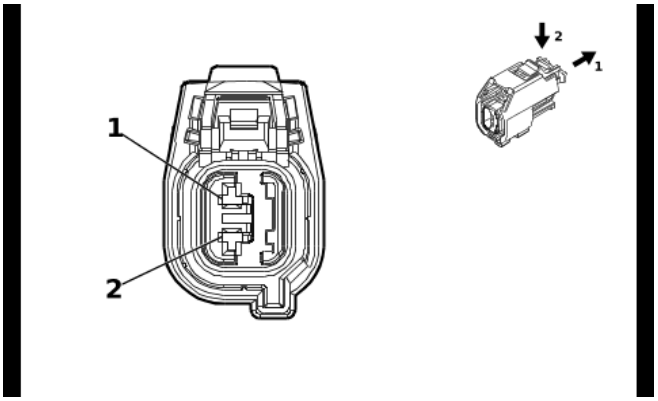
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B5LR Wheel Speed Sensor - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY / BK	7127	Left Rear Wheel Speed Sensor Control	I	—
2	0.75	BU	884	Left Rear Wheel Speed Sensor Signal	I	—

B5RF Wheel Speed Sensor - Right Front



5666214

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33189092
Service Connector: 85526683
Description: 2-Way F 1.5 OCS Series, Sealed(GY)

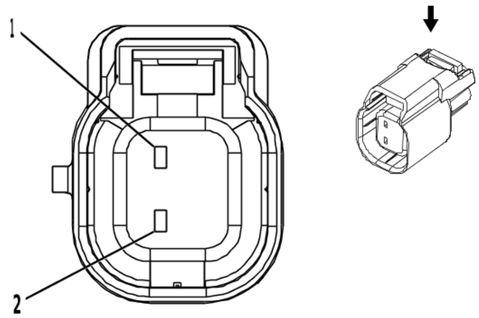
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required
II	Not required	J-35616-2A (GY)	No Tool Required

B5RF Wheel Speed Sensor - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY / BN	7065	Right Front Wheel Speed Sensor Control	I	L5P
	0.5	GY / BN	7065	Right Front Wheel Speed Sensor Control	II	L8T
2	0.5	YE	872	Right Front Wheel Speed Sensor Signal	I	L5P
	0.5	YE	872	Right Front Wheel Speed Sensor Signal	II	L8T

B5RR Wheel Speed Sensor - Right Rear



4115616

Connector Part Information

Harness Type: Chassis Rear Wiring Harness Extension Harness
OEM Connector: 85564685
Service Connector: Service by Harness - See Part Catalog
Description: Wheel Speed Sensor

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B5RR Wheel Speed Sensor - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY / YE	7128	Right Rear Wheel Speed Sensor Control	I	—
2	0.75	VT	882	Right Rear Wheel Speed Sensor Signal	I	—

B9D Ambient Air Temperature Sensor - Mirror

—

Connector Part Information

Harness Type: Passenger Outside Rearview Mirror
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

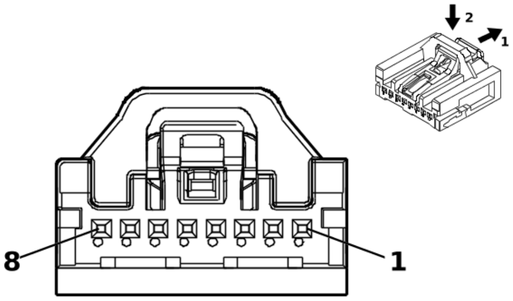
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B9D Ambient Air Temperature Sensor - Mirror

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BU / GY	636	Ambient Air Temperature Sensor Signal	I	—
2	—	BK / GN	580	Engine Control Sensors Low Reference 2	I	—

B10B Ambient Light/Sunload Sensor



5200269

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35068228
Service Connector: 84769201
Description: 8-Way F Mini 50 Series(BK)

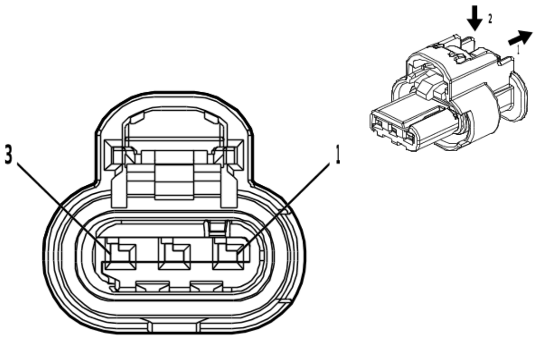
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

B10B Ambient Light/Sunload Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	590	Driver Solar Sensor Signal	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	WH / BU	278	Ambient Light Sensor Signal	I	—
4	0.35	BU / WH	734	Inside Air Temperature Sensor Signal	I	—
5	0.35	GY / WH	728	Security Indicator Control	I	—
6	0.35	BK / GN	7567	Solar Sensor Low Reference	I	—
7 - 8	—	—	—	Not Occupied	—	—

B12P Automatic Transmission Fluid Pressure Sensor - Power Take-Off (PTO)



4581126

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B12P Automatic Transmission Fluid Pressure Sensor - Power Take-Off (PTO)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN / WH	8234	Power Take Off Pressure Sensor Signal	I	—
2	0.5	WH	8232	Power Take Off Pressure Sensor 5 Volt Reference	I	—
3	0.5	YE	8233	Power Take Off Pressure Sensor Low Reference	I	—

B13 Transmission Fluid Temperature Sensor (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B13 Transmission Fluid Temperature Sensor (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK / BN	586	Transmission Fluid Temperature Sensor Low Reference	I	—
2	—	BN / YE	585	Transmission Fluid Temperature Sensor Signal	I	—

B14A Transmission Output Shaft Speed Sensor (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B14A Transmission Output Shaft Speed Sensor (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	YE / OG	6358	Output Speed Signal	I	—
2	—	GN	4170	Transmission Output Shaft Speed Sensor Circuit 9V Reference	I	—

B14C Transmission Input Shaft Speed Sensor (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B14C Transmission Input Shaft Speed Sensor (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	WH / VT	6353	Input Speed Signal	I	—
2	—	BU	4171	Transmission Input Shaft Speed Sensor Circuit 9V Reference	I	—

B14DA Transmission Intermediate Speed Sensor 1 (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B14DA Transmission Intermediate Speed Sensor 1 (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	VT / GN	4510	Transmission Intermediate Speed Signal	I	—
2	—	GN	4170	Transmission Output Shaft Speed Sensor Circuit 9V Reference	I	—

B14DB Transmission Intermediate Speed Sensor 2 (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

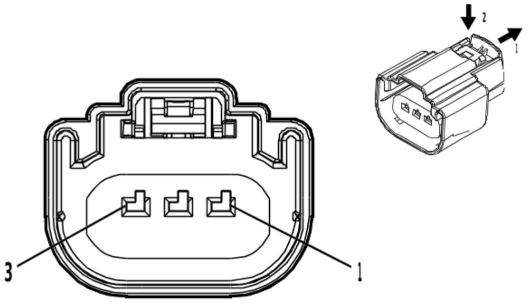
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B14DB Transmission Intermediate Speed Sensor 2 (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	WH / BU	6254	Transmission Input Speed Sensor Signal	I	—
2	—	BU	4171	Transmission Input Shaft Speed Sensor Circuit 9V Reference	I	—

B18 Battery Current Sensor



4569745

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33343869
Service Connector: 19179750
Description: 3-Way F 1.5 MX Series, Sealed(BK)

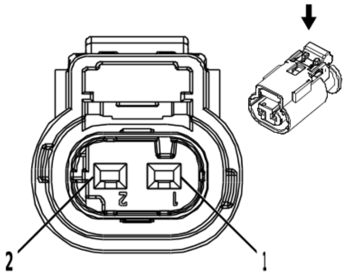
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

B18 Battery Current Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BU / VT	5076	Current Sensor Voltage Reference	I	—
2	0.35	BK / VT	5077	Current Sensor Low Reference	I	—
3	0.35	WH / YE	5075	Current Sensor Signal	I	—

B20 Brake Fluid Level Switch



2717066

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed(BK)

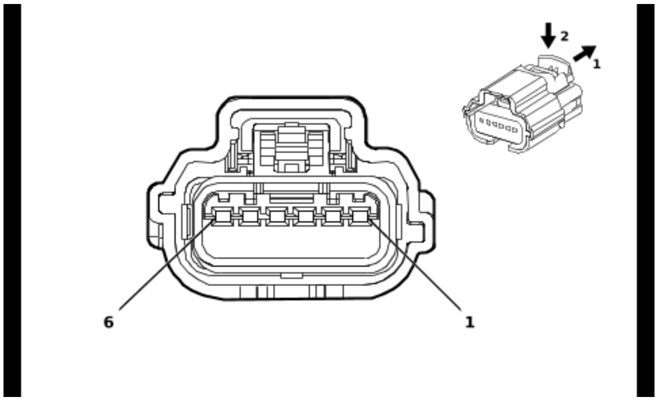
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B20 Brake Fluid Level Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN / GY	333	Brake Fluid Level Signal	I	—
2	0.75	BK	150	Ground	I	—

B22 Brake Pedal Position Sensor



4773396

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35199160
Service Connector: 84683650
Description: 6-Way F 64 Series, Sealed(NA)

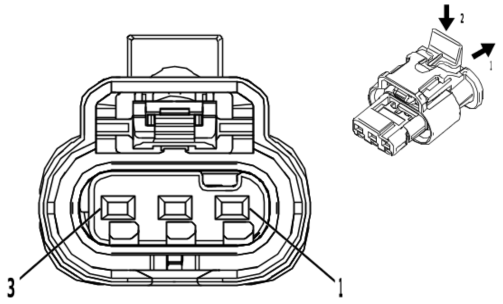
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

B22 Brake Pedal Position Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK / BN	5360	Brake Apply Sensor Low Reference	I	—
2	0.35	WH	5359	Brake Apply Sensor Control	I	—
3	0.35	BU / YE	5361	Brake Apply Sensor Signal	I	—
4	0.35	WH / GN	5380	Brake Position Sensor Signal	I	—
5	0.35	BK / YE	5382	Brake Position Sensor Low Reference	I	—
6	0.35	WH / RD	5381	Brake Position Sensor 5V Reference	I	—

B23 Camshaft Position Sensor



4249125

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13594670
Service Connector: 86792094
Description: 3-Way F 1.2 MCP Series, Sealed(BN)

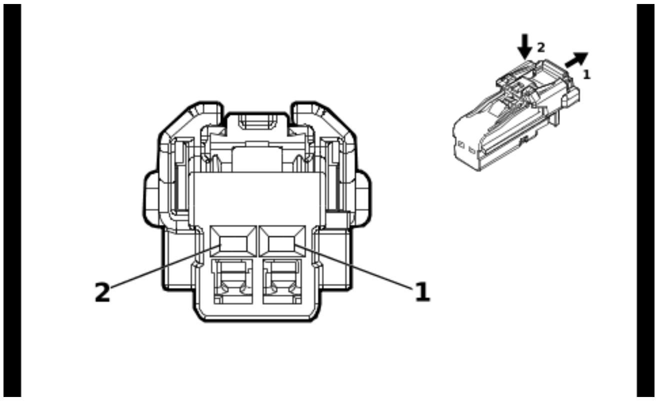
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B23 Camshaft Position Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY / BU	5300	Intake Camshaft Position Sensor 1 Voltage Reference	I	L5P
2	0.5	BK / GN	5301	Intake Camshaft Position Sensor Low Reference 1	I	L5P
3	0.5	YE / VT	5275	Intake Camshaft Position Sensor 1	I	L5P

B24LF Mobile Telephone Microphone - Left Front



4115691

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 35311666
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series(BK)

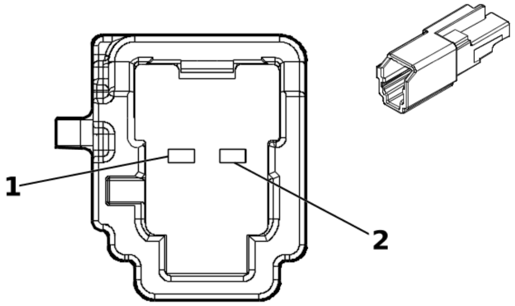
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B24LF Mobile Telephone Microphone - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK / BN	654	Cellular Telephone Microphone Low Reference	I	—
2	0.35	BU	655	Cellular Telephone Microphone Signal	I	—

B24RF Mobile Telephone Microphone - Right Front (IOS/IOT)



5360948

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 35264701
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 MCON Series(GY)

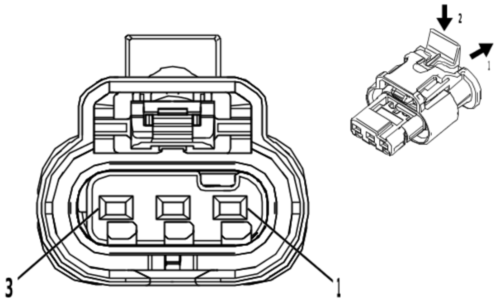
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

B24RF Mobile Telephone Microphone - Right Front (IOS/IOT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BU / BK	7044	Microphone [-] Signal	I	—
2	0.35	VT / YE	7043	Microphone [+] Signal	I	—

B26 Crankshaft Position Sensor (L5P)



4249125

Connector Part Information

Harness Type: Engine Jumper Wiring Harness
OEM Connector: 13594670
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCP Series, Sealed(BN)

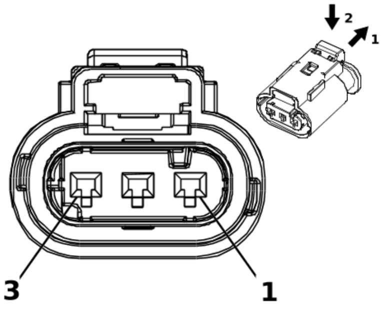
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B26 Crankshaft Position Sensor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT / BU	6270	Crankshaft Position Sensor Voltage	I	L5P
2	0.5	BK / VT	6272	Crankshaft Position Sensor Low Reference	I	L5P
3	0.5	GN	6271	Crankshaft Position Sensor Signal	I	L5P

B26 Crankshaft Position Sensor (L8T)



2717069

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13763990
Service Connector: 84601390
Description: 3-Way F 1.2 Multilock Series, Sealed(BK)

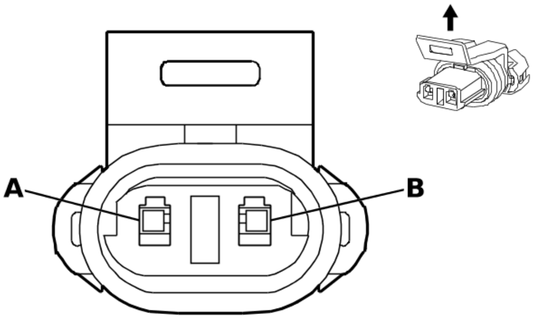
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B26 Crankshaft Position Sensor (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN	6271	Crankshaft Position Sensor Signal	I	—
2	0.5	BK / VT	6272	Crankshaft Position Sensor Low Reference	I	—
3	0.5	VT / BU	6270	Crankshaft Position Sensor Voltage	I	—

B33 Engine Coolant Level Switch (L5P)



655783

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 15324243
Service Connector: 19368034
Description: 2-Way F 150 Metri-Pack Series, Sealed(GY)

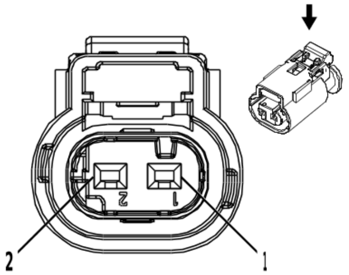
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

B33 Engine Coolant Level Switch (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	BU / YE	68	Low Coolant Level Indicator Control	I	—
B	0.75	BK / WH	451	Signal Ground	I	—

B34 Engine Coolant Temperature Sensor (L5P)



2717066

Connector Part Information

Harness Type: Engine Jumper Wiring Harness
OEM Connector: 13503566
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed(BK)

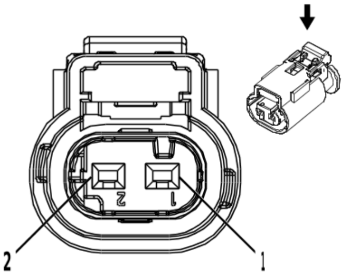
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B34 Engine Coolant Temperature Sensor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU	410	Engine Coolant Temperature Sensor Signal	I	L5P
2	0.5	BU	410	Engine Coolant Temperature Sensor Signal	I	L5P

B34 Engine Coolant Temperature Sensor (L8T)



2717066

Connector Part Information

Harness Type: Engine Jumper Wiring Harness
OEM Connector: 13503566
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed(BK)

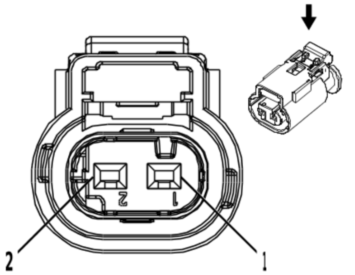
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B34 Engine Coolant Temperature Sensor (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK / BN	2761	Coolant Temperature Sensor Low Reference	I	—
	0.5	BU	410	Engine Coolant Temperature Sensor Signal	I	—
2	0.5	BK / YE	548	Engine Control Sensors Low Reference 1	I	—

B35 Engine Oil Level Switch (L5P)



2717066

Connector Part Information

Harness Type: Engine Jumper Wiring Harness
OEM Connector: 13503566
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed(BK)

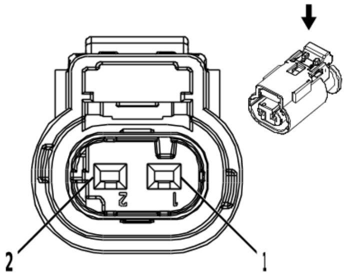
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B35 Engine Oil Level Switch (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK / WH	451	Signal Ground	I	L5P
2	0.5	BN / GN	1174	Oil Level Switch Signal	I	L5P

B35 Engine Oil Level Switch (L8T)



2717066

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed(BK)

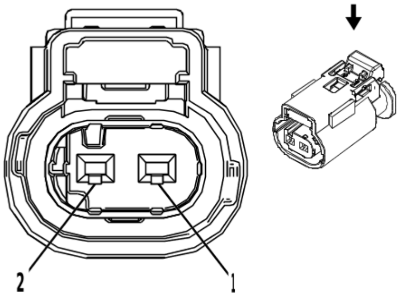
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required
II	Not required	J-35616-16 (L-GN)	No Tool Required

B35 Engine Oil Level Switch (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN / GN	1174	Oil Level Switch Signal	II	—
2	1	BK / WH	451	Signal Ground	I	—

B36 Engine Oil Temperature Sensor (L8T)



2830969

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13840071
Service Connector: 13587321
Description: 2-Way F 1.2 Multilock Series, Sealed(D-GY)

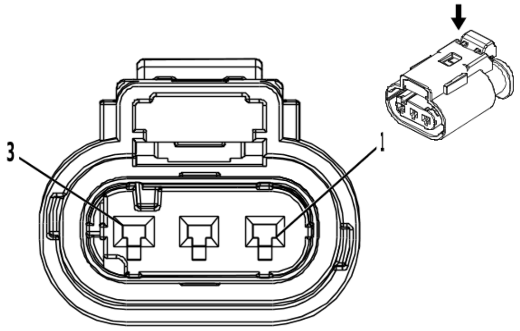
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B36 Engine Oil Temperature Sensor (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN / BU	357	Oil Temperature Sensor Signal	I	—
2	0.5	BK / YE	548	Engine Control Sensors Low Reference 1	I	—

B37B Engine Oil Pressure Sensor (L5P)



3240107

Connector Part Information

Harness Type: Engine Jumper Wiring Harness
OEM Connector: 13503573
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 Multilock Series, Sealed(BK)

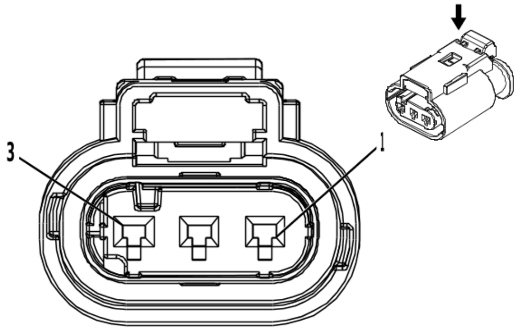
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B37B Engine Oil Pressure Sensor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE / BN	331	Oil Pressure Sensor Signal	I	L5P
2	0.5	BK / VT	2755	Oil Pressure Sensor Low Reference	I	L5P
3	0.5	WH / RD	2705	Oil Pressure Sensor 5V Reference	I	L5P

B37B Engine Oil Pressure Sensor (L8T)



3240107

Connector Part Information

Harness Type: Engine Jumper Wiring Harness
OEM Connector: 13503573
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 Multilock Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B37B Engine Oil Pressure Sensor (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE / BN	331	Oil Pressure Sensor Signal	I	—
2	0.5	BK / YE	548	Engine Control Sensors Low Reference 1	I	—
3	0.5	WH / RD	480	Engine Control Vehicle Sensors 5 Volt Reference 1	I	—

B39 A/C Evaporator Temperature Sensor

—

Connector Part Information

Harness Type: HVAC Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

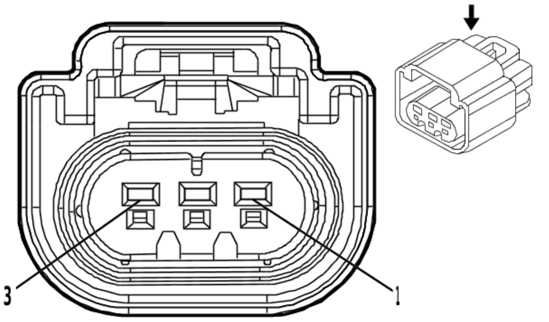
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B39 A/C Evaporator Temperature Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BN	6137	A/C Evaporator Temperature Sensor Signal	I	—
2	—	BK / YE	1791	Air Temperature Door Low Reference	I	—

B47 Fuel Pressure Sensor (L5P)



1860942

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 13511131
Service Connector: 19168035
Description: 3-Way F 150 GT Series, Sealed(BK)

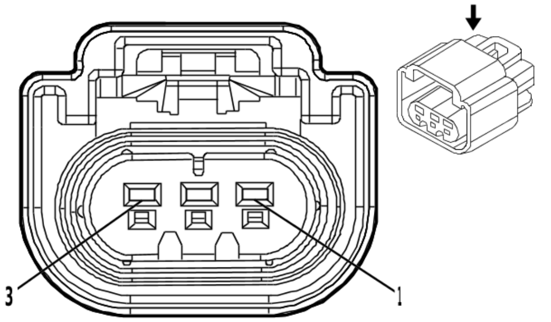
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

B47 Fuel Pressure Sensor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75 0.5	BU / WH BU / WH	7446 7446	Fuel Pressure Sensor Signal Fuel Pressure Sensor Signal	I I	L5P+ N2N L8T+ N2N
2	0.5	BK / YE	7447	Fuel Pressure Sensor Low Reference	I	—
3	0.5	BN / RD	7445	Fuel Line Pressure Sensor 5V Reference	I	—

B47 Fuel Pressure Sensor (L8T)



1860942

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 13511131
Service Connector: 19168035
Description: 3-Way F 150 GT Series, Sealed(BK)

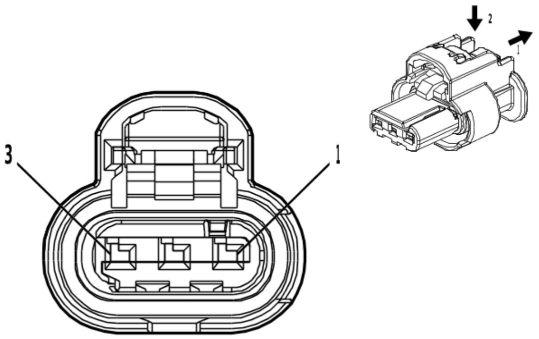
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

B47 Fuel Pressure Sensor (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU / WH	7446	Fuel Pressure Sensor Signal	I	—
2	0.5	BK / YE	7447	Fuel Pressure Sensor Low Reference	I	—
3	0.5	BN / RD	7445	Fuel Line Pressure Sensor 5V Reference	I	—

B47 Fuel Pressure Sensor (L8T-N2N)



Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed(BK)

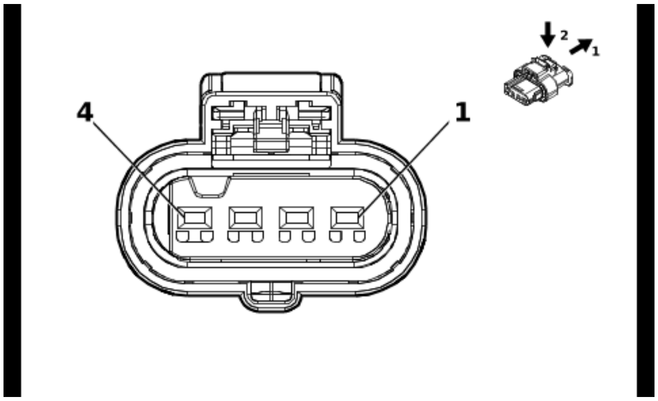
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B47 Fuel Pressure Sensor (L8T-N2N)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN / RD	7445	Fuel Line Pressure Sensor 5V Reference	I	—
2	0.5	BK / YE	7447	Fuel Pressure Sensor Low Reference	I	—
3	0.5	BU / WH	7446	Fuel Pressure Sensor Signal	I	—

B47B Fuel Rail Pressure Sensor (L5P)



5985721

Connector Part Information

Harness Type: Engine Jumper Wiring Harness
OEM Connector: 13534801
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 1.2 HPF Series, Sealed(BK)

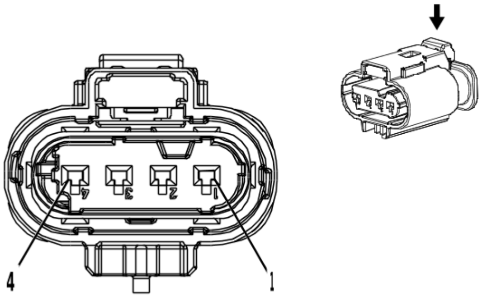
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B47B Fuel Rail Pressure Sensor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN / RD	2917	Fuel Rail Pressure Sensor 5V Reference	I	L5P
2	0.5	BN / YE	2161	Fuel Rail Pressure Sensor 2 Signal	I	L5P
3	0.5	BK / GN	2919	Fuel Rail Pressure Sensor Low Reference	I	L5P
4	0.5	BU / WH	2918	Fuel Rail Pressure Sensor Signal	I	L5P

B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (L8T)



4381050

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33253021
Service Connector: 19354075
Description: 4-Way F 1.2 Multilock Series, Sealed(BK)

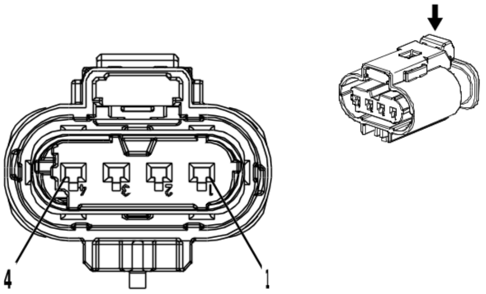
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY / WH	3113	HO2S Heater Low Control Bank 1 Sensor 1	I	—
2	0.75	VT / BU	5293	Powertrain Main Relay Fused Supply Voltage 4	I	—
3	0.5	WH / BK	3111	HO2S Low Signal Bank 1 Sensor 1	I	—
4	0.5	VT / GY	3110	HO2S High Signal Bank 1 Sensor 1	I	—

B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (L8T)



4036370

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 15532690
Service Connector: 19330920
Description: 4-Way F 1.2 Multilock Series, Sealed(GY)

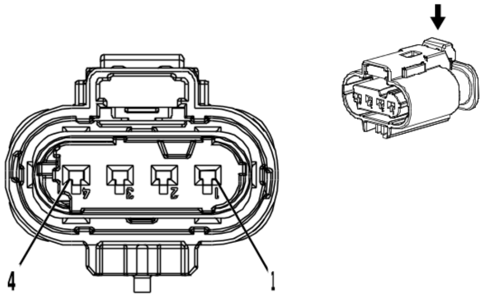
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY / WH	3122	HO2S Heater Low Control Bank 1 Sensor 2	I	—
2	0.75	VT / BU	5294	Powertrain Main Relay Fused Supply Voltage 5	I	—
3	0.5	WH / YE	3121	HO2S Low Signal Bank 1 Sensor 2	I	—
4	0.5	VT / BU	3120	HO2S High Signal Bank 1 Sensor 2	I	—

B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L8T)



4381050

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33253021
Service Connector: 19354075
Description: 4-Way F 1.2 Multilock Series, Sealed(BK)

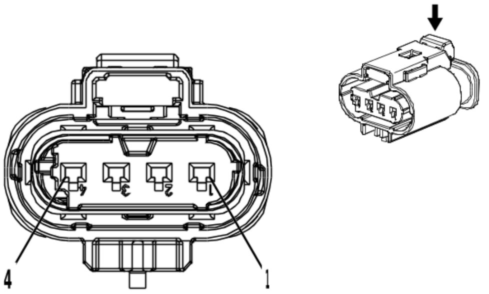
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN / YE	3212	HO2S Heater Low Control Bank 2 Sensor 1	I	—
2	0.75	VT / BU	5293	Powertrain Main Relay Fused Supply Voltage 4	I	—
3	0.5	YE / WH	3211	HO2S Low Signal Bank 2 Sensor 1	I	—
4	0.5	VT / WH	3210	HO2S High Signal Bank 2 Sensor 1	I	—

B52F Heated Oxygen Sensor - Bank 2 Sensor 2 (L8T)



4036370

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 15532690
Service Connector: 19330920
Description: 4-Way F 1.2 Multilock Series, Sealed(GY)

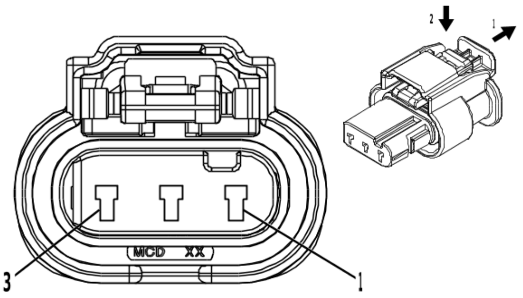
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B52F Heated Oxygen Sensor - Bank 2 Sensor 2 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH / BN	3223	HO2S Heater Low Control Bank 2 Sensor 2	I	—
2	0.75	VT / BU	5294	Powertrain Main Relay Fused Supply Voltage 5	I	—
3	0.5	YE / BU	3221	HO2S Low Signal Bank 2 Sensor 2	I	—
4	0.5	VT / GN	3220	HO2S High Signal Bank 2 Sensor 2	I	—

B55 Engine Hood Switch



4421568

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33320864
Service Connector: 19368220
Description: 3-Way F 1.2 MCON-LL Series, Sealed(BK)

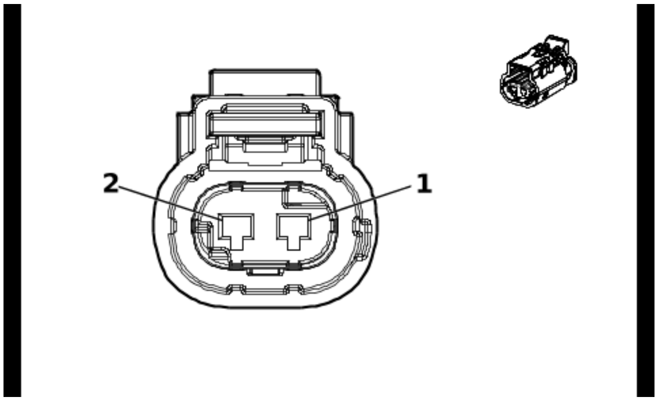
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B55 Engine Hood Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	4063	Hood Status A Signal	I	—
2	0.35	BN / GN	4064	Hood Status B Signal	I	—
3	0.75	BK	150	Ground	I	—

B59L Front Impact Sensor - Left



6039015

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35536107
Service Connector: 85611419
Description: 2-Way F 1.2 MLK Series, Sealed(BK)

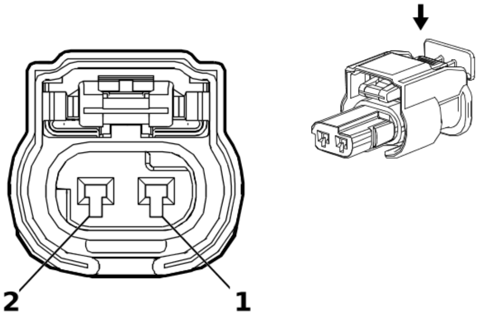
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B59L Front Impact Sensor - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG / YE	354	Left Front Impact Discriminating Sensor Signal	I	—
2	0.5	BK / OG	5045	Left Front Impact Discriminating Sensor Low Reference	I	—

B59R Front Impact Sensor - Right



5340211

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35271165
Service Connector: 84869316
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

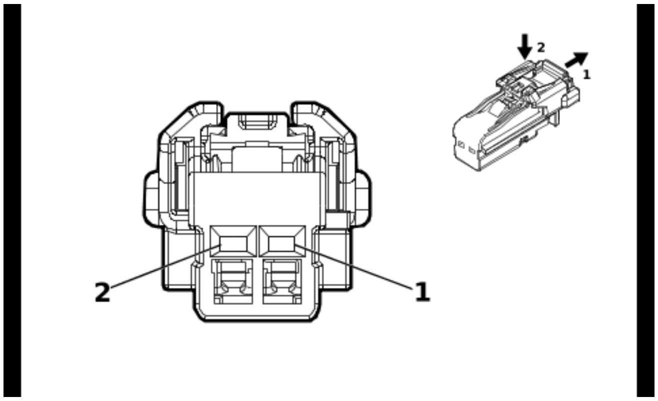
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B59R Front Impact Sensor - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG / GN	1409	Right Front Impact Discriminating Sensor Signal	I	—
2	0.5	BK / OG	5600	Right Front Impact Discriminating Sensor Low Reference	I	—

B61P Seat Belt Tension Sensor - Passenger



4115691

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35311666
Service Connector: 87816612
Description: 2-Way F 1.2 MCON Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B61P Seat Belt Tension Sensor - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY / OG	3946	Passenger Automatic Locking Retractor Switch Low Reference	I	—
2	0.5	OG / BN	3947	Passenger Automatic Locking Retractor Switch Signal	I	—

B62D Seat Position Sensor - Driver

—

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

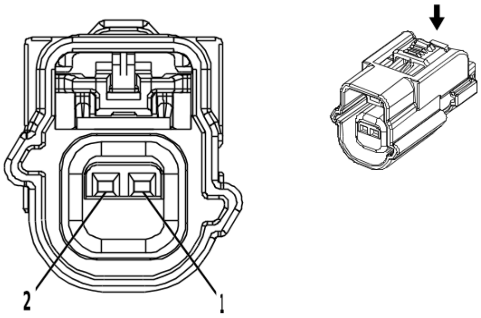
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B62D Seat Position Sensor - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK / OG	1363	Driver Seat Belt Switch Low Reference	I	—
2	—	OG / BN	5055	Driver Seat Position Switch Signal	I	—

B63LF Side Impact Sensor - Left Front



3931604

Connector Part Information

Harness Type: Driver Door Wiring Harness
OEM Connector: 33503704
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 0.64 Series, Sealed(BN)

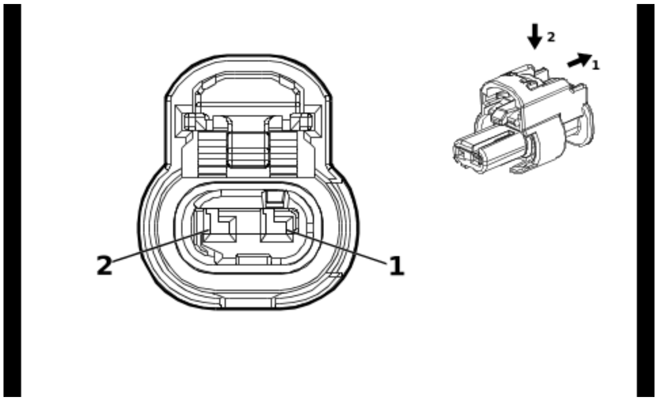
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

B63LF Side Impact Sensor - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	OG / GN	2132	Left Front Side Impact Sensor Signal	I	—
2	0.75	BK / OG	6628	Left Front Side Impact Sensor Low Reference	I	—

B63LR Side Impact Sensor - Left Rear



4649903

Connector Part Information

Harness Type: Left Rear Door Wiring Harness
OEM Connector: 33327048
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

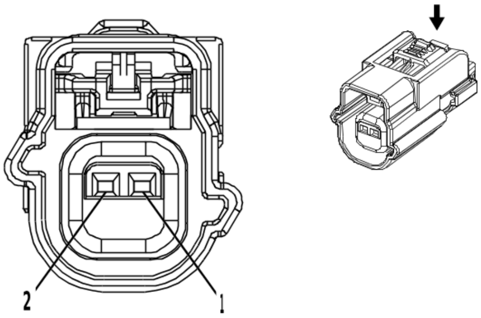
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B63LR Side Impact Sensor - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG / BU	6622	Left Rear Side Impact Sensor Signal	I	—
2	0.5	BK / OG	6623	Left Rear Side Impact Sensor Low Reference	I	—

B63RF Side Impact Sensor - Right Front



3931604

Connector Part Information

Harness Type: Passenger Door Wiring Harness
OEM Connector: 33503704
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 0.64 Series, Sealed(BN)

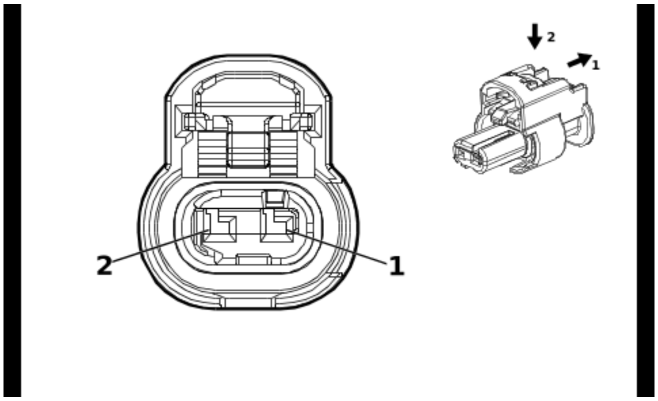
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

B63RF Side Impact Sensor - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN / OG	2134	Right Front Side Impact Sensor Signal	I	—
2	0.75	BK / OG	6629	Right Front Side Impact Sensor Low Reference	I	—

B63RR Side Impact Sensor - Right Rear



4649903

Connector Part Information

Harness Type: Right Rear Door Wiring Harness
OEM Connector: 33327048
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

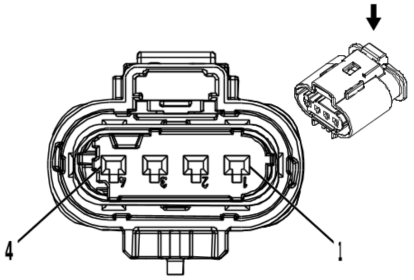
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B63RR Side Impact Sensor - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG / VT	6624	Right Middle Side Impact Sensor Signal	I	—
2	0.5	BK / OG	6625	Right Middle Side Impact Sensor Low Reference	I	—

B65 Intake Manifold Pressure and Air Temperature Sensor



2717079

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13503575
Service Connector: 13587299
Description: 4-Way F 1.2 Multilock Series, Sealed(BK)

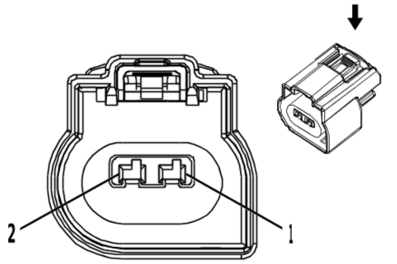
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	No Tool Required	No Tool Required

B65 Intake Manifold Pressure and Air Temperature Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN	7348	Intake Air Temperature Sensor 2 Signal	I	L5P
2	0.5	GY / RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	L5P
3	0.5	BK / GN	469	Manifold Absolute Pressure Sensor Low Reference	I	L5P
4	—	GN / WH	432	Manifold Absolute Pressure Sensor Signal	II	—

B68A Knock Sensor 1 (L8T)



2717073

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13814755
Service Connector: 19301207
Description: 2-Way F 1.5 MX Series, Sealed(BK)

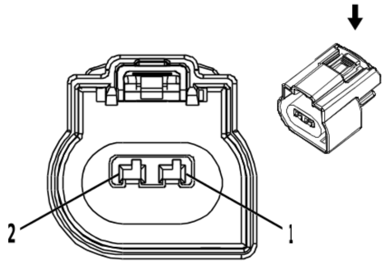
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

B68A Knock Sensor 1 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT / GY	496	Knock Sensor 1 Signal	I	—
2	0.75	BK / YE	1716	Knock Sensor Low Reference 1	I	—

B68B Knock Sensor 2 (L8T)



2717073

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13814755
Service Connector: 19301207
Description: 2-Way F 1.5 MX Series, Sealed(BK)

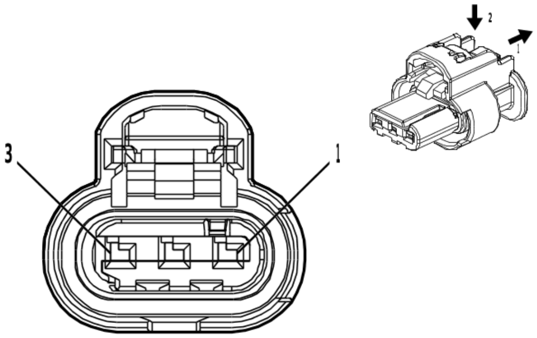
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

B68B Knock Sensor 2 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	WH / GY	1876	Knock Sensor 2 Signal	I	—
2	0.75	BK / GY	2303	Knock Sensor Low Reference 2	I	—

B74 Manifold Absolute Pressure Sensor (L5P)



4581126

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13514590
Service Connector: 86792094
Description: 3-Way F 1.2 MCON-CB Series, Sealed(BK)

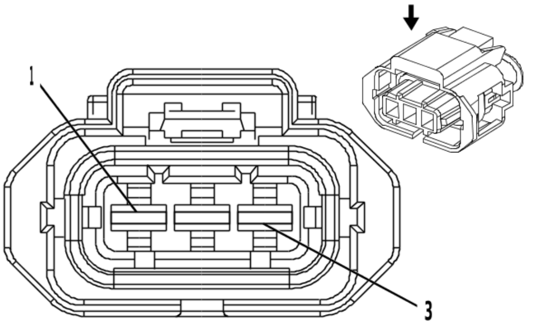
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B74 Manifold Absolute Pressure Sensor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY / RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	L5P
2	0.5	BK / GN	469	Manifold Absolute Pressure Sensor Low Reference	I	L5P
3	0.5	GN / WH	432	Manifold Absolute Pressure Sensor Signal	I	L5P

B74 Manifold Absolute Pressure Sensor (L8T)



1914850

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 15397338
Service Connector: 84815530
Description: 3-Way F 2.8 Junior Power Timer Series, Sealed(BK)

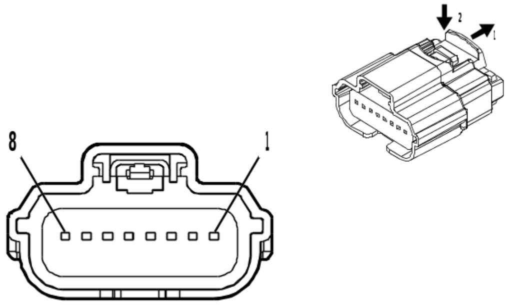
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

B74 Manifold Absolute Pressure Sensor (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY / RD	2704	Manifold Absolute Pressure Sensor 5V Reference	I	—
2	0.5	BK / GN	469	Manifold Absolute Pressure Sensor Low Reference	I	—
3	0.5	GN / WH	432	Manifold Absolute Pressure Sensor Signal	I	—

B75C Multifunction Intake Air Sensor (L5P)



4708234

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 35192853
Service Connector: 84677313
Description: 8-Way F 64 Series, Sealed(BK)

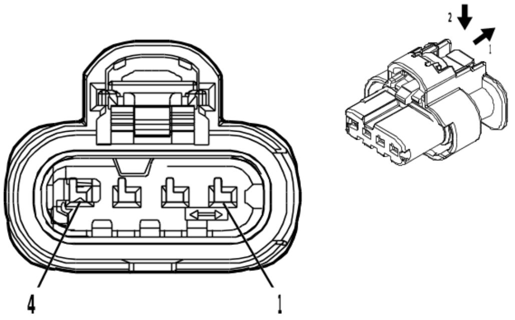
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

B75C Multifunction Intake Air Sensor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH / BU	6289	Intake Air Temperature Sensor Signal	I	—
2	0.5	WH / RD	3201	Throttle Inlet Absolute Pressure Sensor 5V Reference	I	—
3	0.5	BK / VT	2760	Intake Air Temperature Sensor Low Reference	I	—
4	0.5	YE / WH	3200	Throttle Inlet Absolute Pressure Sensor Signal	I	—
5	0.5	VT / BU	5294	Powertrain Main Relay Fused Supply Voltage 5	I	—
6	0.5	GN / WH	492	Mass Air Flow Sensor Signal	I	—
7	0.75	BK / WH	451	Signal Ground	I	—
8	0.5	BN / GY	4008	Humidity Sensor Signal	I	—

B75C Multifunction Intake Air Sensor (L8T)



4934614

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33367416
Service Connector: 85519071
Description: 4-Way F 1.2 MCON-CB Series, Sealed(BK)

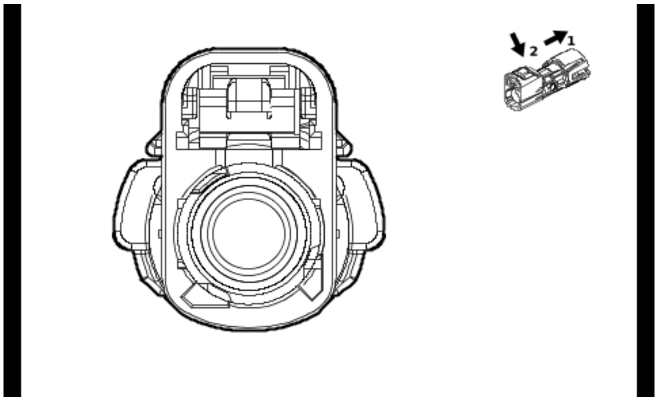
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B75C Multifunction Intake Air Sensor (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT / BU	5294	Powertrain Main Relay Fused Supply Voltage 5	I	—
2	0.5	GN / WH	492	Mass Air Flow Sensor Signal	I	—
3	0.5	GN / WH	4622	Engine Control Module LIN Bus 2	I	—
4	1	BK / WH	451	Signal Ground	I	—

B87 Rearview Camera (UVB)



5757455

Connector Part Information

Harness Type: Endgate Wiring Harness COAX
OEM Connector: 35187043
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Coax Type(OG)

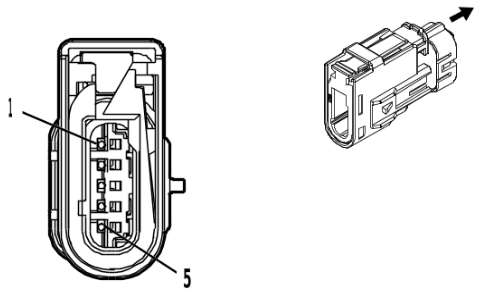
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B87 Rearview Camera (UVB)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	Coax Cable	—	Rear Vision Camera Coaxial Video Signal	I	—

B87 Rearview Camera (UVC+IOR)



4808321

Connector Part Information

Harness Type: Rearview Camera Wiring Harness
OEM Connector: 35028910
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way M 1.2 Series, Sealed(GY)

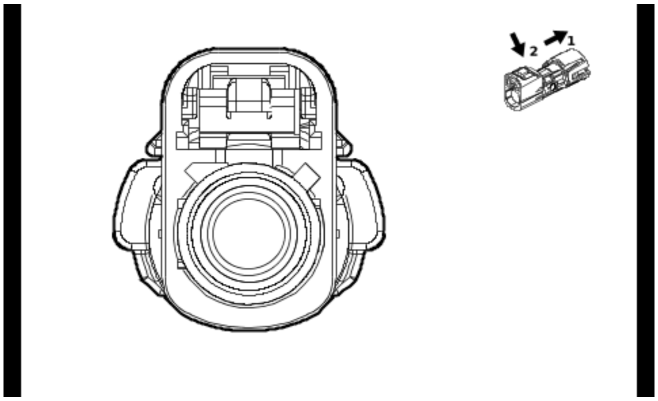
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-13 (BU)	No Tool Required
II	Not required	J-35616-17 (L-GN)	No Tool Required

B87 Rearview Camera (UVC+IOR)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY / YE	6972	Rearview Camera Signal [+]	II	—
2	0.5	WH / BU	6973	Rearview Camera Signal [-]	II	—
3	0.35	BU	6974	Rearview Camera Low Reference	I	—
4	0.5	BK / WH	1751	Signal Ground	II	—
5	0.5	VT / GN	1739	Run/Crank Ignition 1 Voltage	II	—

B87 Rearview Camera (UVI/UVS)



5758030

Connector Part Information

Harness Type: Endgate Wiring Harness COAX
OEM Connector: 35187032
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Coax Type(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B87 Rearview Camera (UVI/UVS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	Coax Cable	—	Rear Vision Camera Coaxial Video Signal	I	—

B87CA Rearview Driver Information Camera - Cargo Area X1 (UVI)

—

Connector Part Information

Harness Type: Rear Cargo Camera Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way

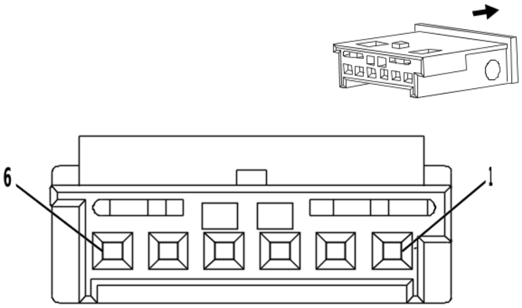
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B87CA Rearview Driver Information Camera - Cargo Area X1 (UVI)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
BK	—	—	Coax Cable	Coax Cable	I	—

B99 Steering Wheel Angle Sensor



1862024

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 10820415
Service Connector: 13505903
Description: 6-Way F 0.64 Micro-Quadlock Series(BK)

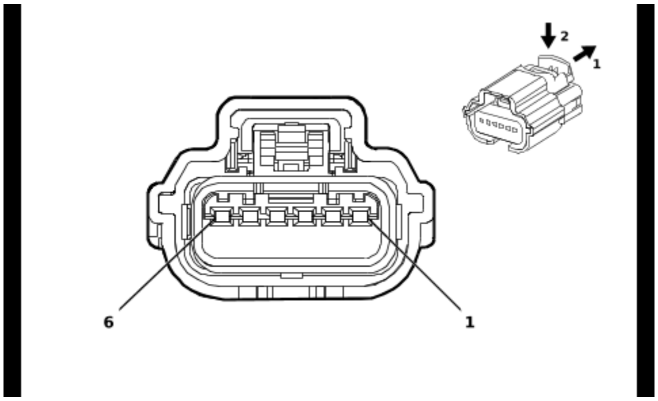
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

B99 Steering Wheel Angle Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH	6106	High Speed GMLAN Serial Data [-] 2	I	—
2	0.35	WH	6106	High Speed GMLAN Serial Data [-] 2	I	—
3	0.35	BU / YE	6105	High Speed GMLAN Serial Data [+] 2	I	—
4	0.35	BU / YE	6105	High Speed GMLAN Serial Data [+] 2	I	—
5	0.35	GN / BN	2087	Multi-axis Acceleration Sensor Supply Voltage	I	—
6	0.35	BK / WH	1851	Signal Ground	I	—

B107 Accelerator Pedal Position Sensor



5157678

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35199156
Service Connector: 84773558
Description: 6-Way F 64 Series, Sealed(BK)

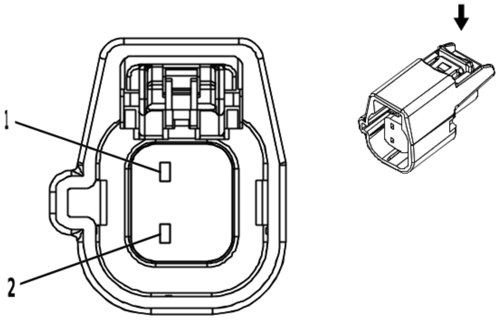
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

B107 Accelerator Pedal Position Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH / RD	1164	Accelerator Pedal Position 5V Reference 1	I	—
2	0.35	YE / WH	1161	Accelerator Pedal Position Signal 1	I	—
3	0.35	BK / BU	1271	Accelerator Pedal Position Low Reference 1	I	—
4	0.35	BK / VT	1272	Accelerator Pedal Position Low Reference 2	I	—
5	0.35	GN / WH	1162	Accelerator Pedal Position Signal 2	I	—
6	0.35	BN / RD	1274	Accelerator Pedal Position 5V Reference 2	I	—

B118B Windshield Washer Fluid Level Switch



3958652

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33113086
Service Connector: 13593220
Description: 2-Way F 1.5 Series, Sealed(L-GY)

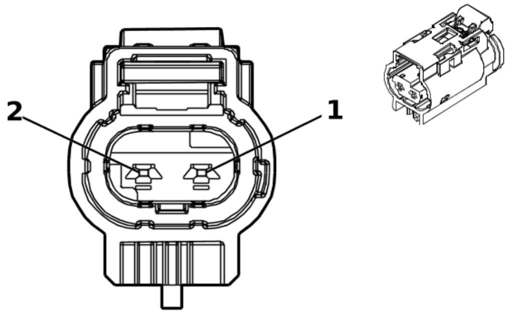
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

B118B Windshield Washer Fluid Level Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT	185	Low Washer Fluid Indicator Control	I	—
2	0.75	BK	150	Ground	I	—

B130A Exhaust Gas Recirculation Temperature Sensor 1



4451423

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13583201
Service Connector: 85518866
Description: 2-Way F 1.2 Multilock Series, Sealed(BK)

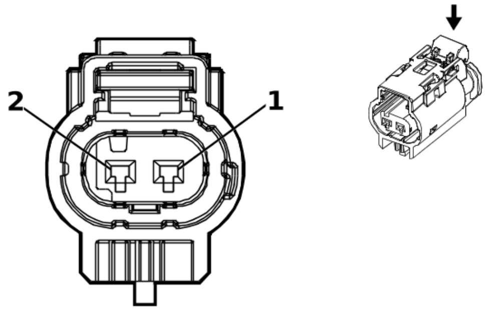
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B130A Exhaust Gas Recirculation Temperature Sensor 1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH / BN	3237	Exhaust Gas Recirculation Temperature Sensor Signal	I	L5P
2	0.5	BK / BU	6274	Exhaust Gas Recirculation Temperature Sensor Low Reference	I	L5P

B130B Exhaust Gas Recirculation Temperature Sensor 2



5207726

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13583199
Service Connector: 19332628
Description: 2-Way F 1.2 Multilock Series, Sealed(GY)

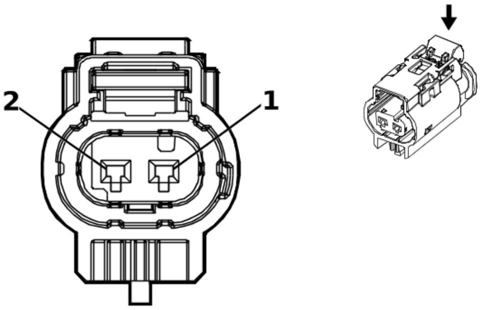
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B130B Exhaust Gas Recirculation Temperature Sensor 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE / GN	3236	Exhaust Gas Recirculation Temperature Sensor 2 Signal	I	L5P
2	0.5	BK / YE	6275	Exhaust Gas Recirculation Temperature Sensor 2 Low Reference	I	L5P

B131A Exhaust Temperature Sensor 1



3747581

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13583195
Service Connector: 84727362
Description: 2-Way F 1.2 Multilock Series, Sealed(BK)

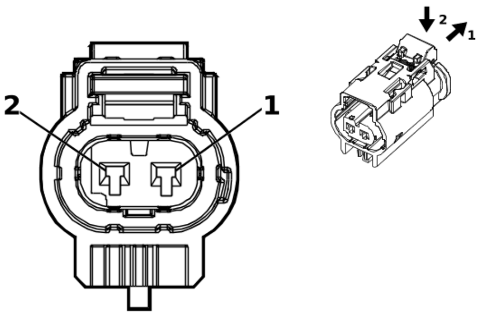
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B131A Exhaust Temperature Sensor 1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU / WH	5277	Exhaust Gas Temperature Sensor 1 Signal	I	L5P
2	0.5	BK / BN	6782	Exhaust Gas Temperature Sensor 1 Low Reference	I	L5P

B131B Exhaust Temperature Sensor 2



3747580

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13583197
Service Connector: 19332627
Description: 2-Way F 1.2 Multilock Series, Sealed(GY)

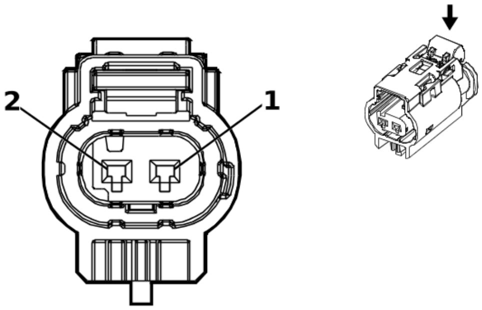
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B131B Exhaust Temperature Sensor 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU / GN	5377	Exhaust Gas Temperature Sensor 2 Signal	I	L5P
2	0.5	BK / BU	6783	Exhaust Gas Temperature Sensor 2 Low Reference	I	L5P

B131C Exhaust Temperature Sensor 3 (L5P)



5207726

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33180624
Service Connector: 19332628
Description: 2-Way F 1.2 Multilock Series, Sealed(GY)

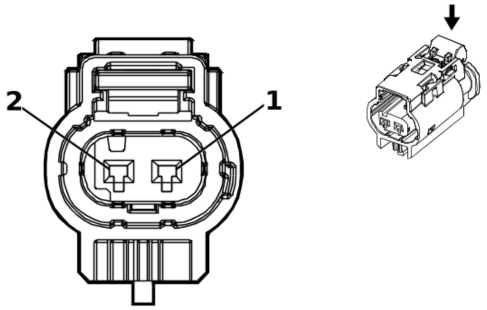
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B131C Exhaust Temperature Sensor 3 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY / WH	5378	Exhaust Gas Temperature Sensor 3 Signal	I	—
2	0.5	BK / GN	3657	Exhaust Gas Temperature Sensor 3 Low Reference	I	—

B131D Exhaust Temperature Sensor 4 (L5P)



5207726

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33180624
Service Connector: 19332628
Description: 2-Way F 1.2 Multilock Series, Sealed(GY)

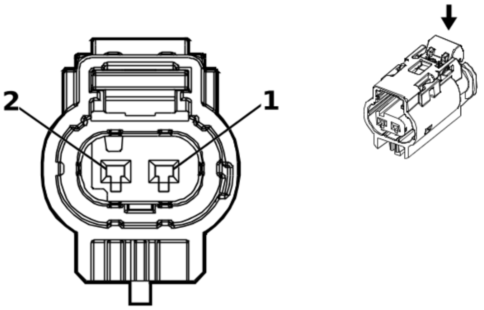
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B131D Exhaust Temperature Sensor 4 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT / WH	3658	Exhaust Gas Temperature Sensor 4 Signal	I	—
2	0.5	BK / GY	3659	Exhaust Gas Temperature Sensor 4 Low Reference	I	—

B131E Exhaust Temperature Sensor 5 (L5P)



5207726

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33180624
Service Connector: 19332628
Description: 2-Way F 1.2 Multilock Series, Sealed(GY)

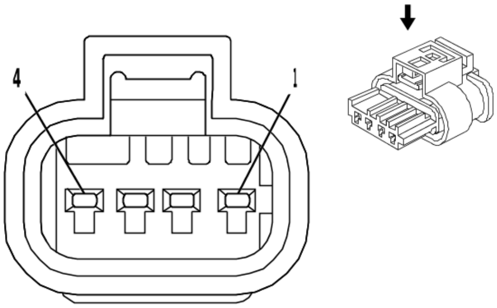
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B131E Exhaust Temperature Sensor 5 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU / GY	3660	Exhaust Gas Temperature Sensor 5 Signal	I	—
2	0.5	BK / VT	3661	Exhaust Gas Temperature Sensor 5 Low Reference	I	—

B136 Exhaust Particulate Matter Sensor (L5P)



2487928

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 13781047
Service Connector: 13581092
Description: 4-Way F 1.2 Series, Sealed(BK)

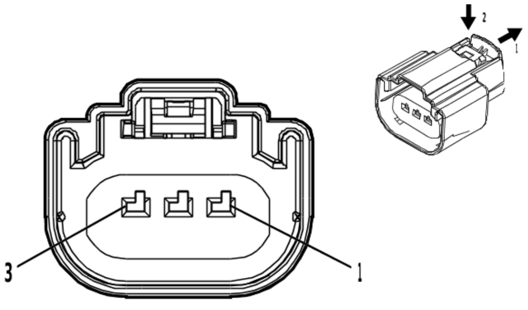
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B136 Exhaust Particulate Matter Sensor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	BK / WH	1651	Signal Ground	I	—
2	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	I	—
3	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	I	—
4	1	VT / BU	3674	NOx Sensor 1 Control	I	—

B139 Transfer Case 2WD/4WD Actuator Position Sensor (HQH)



4569745

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33343869
Service Connector: 19179750
Description: 3-Way F 1.5 MX Series, Sealed(BK)

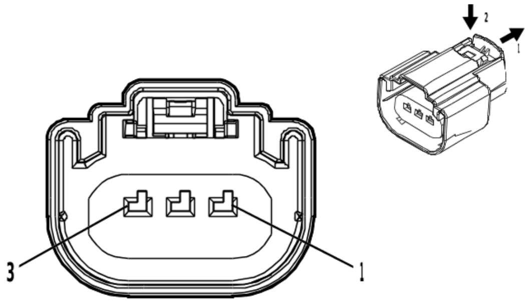
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

B139 Transfer Case 2WD/4WD Actuator Position Sensor (HQH)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH / RD	7477	Gear Position Sensor 5V Reference	I	—
2	0.5	WH / GN	7479	Rotary Position Sensor Signal	I	—
3	0.5	YE / BK	7478	Gear Position Sensor Low Reference	I	—

B139 Transfer Case 2WD/4WD Actuator Position Sensor (NQH)



4569745

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33343869
Service Connector: 19179750
Description: 3-Way F 1.5 MX Series, Sealed(BK)

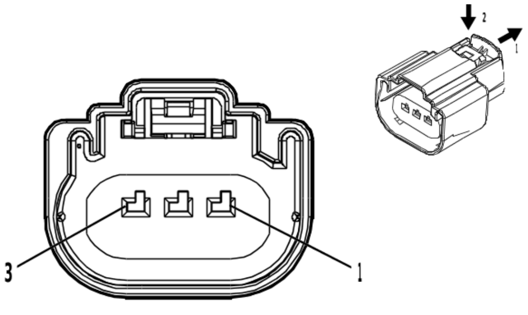
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

B139 Transfer Case 2WD/4WD Actuator Position Sensor (NQH)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH / RD	7477	Gear Position Sensor 5V Reference	I	—
2	0.5	WH / GN	7479	Rotary Position Sensor Signal	I	—
3	0.5	YE / BK	7478	Gear Position Sensor Low Reference	I	—

B150 Fuel Tank Pressure Sensor (L8T+N2N)



4589538

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33343864
Service Connector: 84569854
Description: 3-Way F 1.5 MX Series, Sealed(GY)

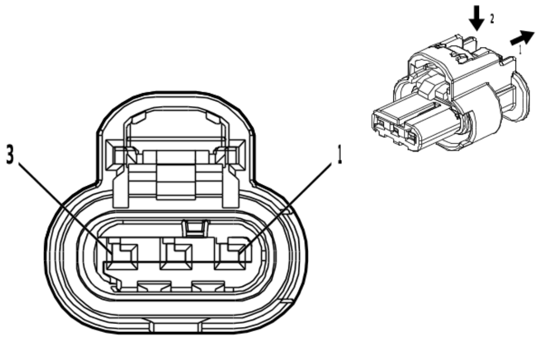
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

B150 Fuel Tank Pressure Sensor (L8T+N2N)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU / GN	890	Fuel Tank Pressure Sensor Signal	I	—
2	0.5	BK / BN	6284	Fuel Tank Pressure Sensor Low Reference	I	—
3	0.5	YE / RD	2709	Fuel Tank Pressure Sensor 5V Reference	I	—

B150 Fuel Tank Pressure Sensor (L8T-N2N)



4778903

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33358808
Service Connector: 86792095
Description: 3-Way F 1.2 MCON-CB Series, Sealed(BK)

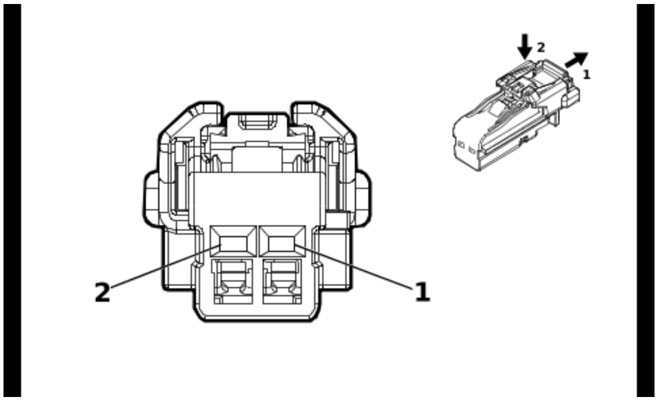
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B150 Fuel Tank Pressure Sensor (L8T-N2N)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU / GN	890	Fuel Tank Pressure Sensor Signal	I	—
2	0.5	BK / BN	6284	Fuel Tank Pressure Sensor Low Reference	I	—
3	0.5	YE / RD	2709	Fuel Tank Pressure Sensor 5V Reference	I	—

B153D Seat Belt Buckle - Driver



4115691

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 6098-8988
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series(BK)

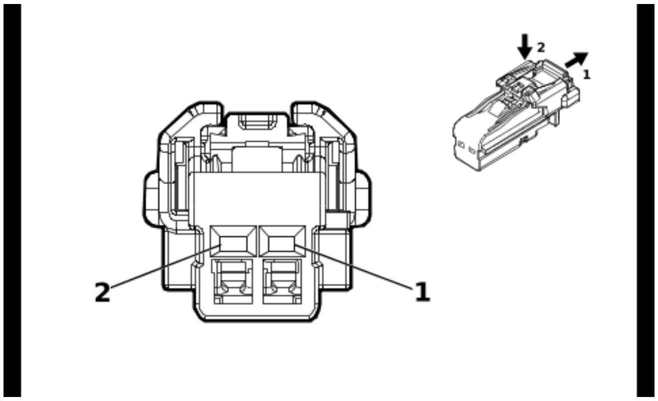
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B153D Seat Belt Buckle - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK / OG	1363	Driver Seat Belt Switch Low Reference	I	—
2	0.35	OG / BN	238	Driver Seat Belt Switch Signal	I	—

B153P Seat Belt Buckle - Passenger



4115691

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 6098-8988
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series(BK)

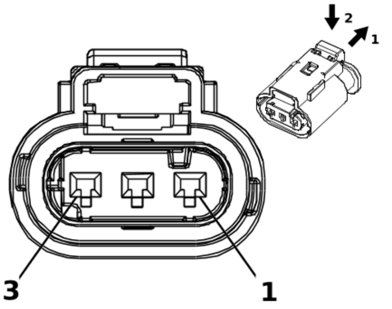
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B153P Seat Belt Buckle - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK / OG	1361	Passenger Seat Belt Switch Low Reference	I	—
2	0.35	OG / VT	1362	Passenger Seat Belt Switch Signal	I	—

B154 Diesel Particulate Filter Exhaust Differential Pressure Sensor (L5P)



2717069

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 13763990
Service Connector: 84601390
Description: 3-Way F 1.2 Multilock Series, Sealed(BK)

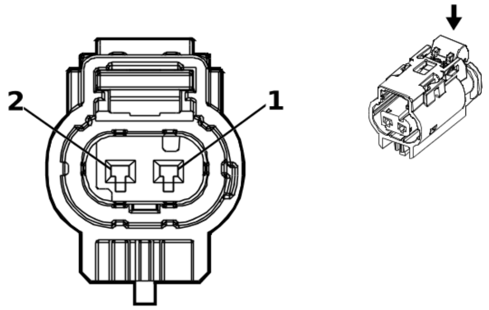
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B154 Diesel Particulate Filter Exhaust Differential Pressure Sensor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	BU	6053	Exhaust Pressure Sensor 1 Signal	I	—
2	1	BK / YE	6055	Exhaust Pressure Sensor 1 Low Reference	I	—
3	1	WH / RD	6054	Exhaust Pressure Sensor 1 5V Reference	I	—

B172LF Brake Pad Wear Sensor - Left Front



3747581

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33226772
Service Connector: 84727362
Description: 2-Way F 1.2 Multilock Series, Sealed(BK)

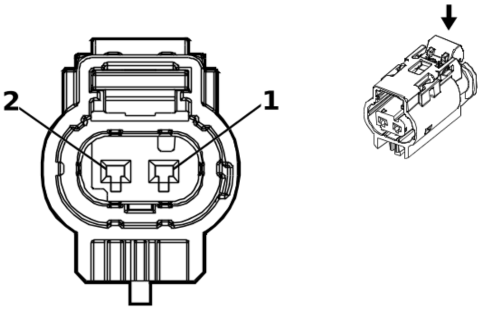
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B172LF Brake Pad Wear Sensor - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	1612	Left Front Brake Pad Wear Sensor 3 Signal	I	—
2	0.75	BK / WH	1751	Signal Ground	I	—

B172LR Brake Pad Wear Sensor - Left Rear



3747581

Connector Part Information

Harness Type: Chassis Rear Wiring Harness Extension Harness
OEM Connector: 13583195
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed(BK)

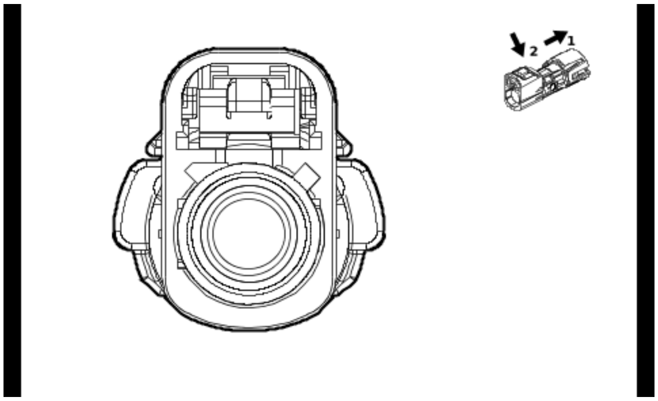
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B172LR Brake Pad Wear Sensor - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GN / YE	1616	Rear Brake Pad Wear Sensor Signal	I	—
2	0.75	BK / WH	1751	Signal Ground	I	—

B174G Frontview Camera - Grille (UVI)



5758030

Connector Part Information

Harness Type: Front Grille Wiring Harness COAX
OEM Connector: 13529782
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Coax Type(BK)

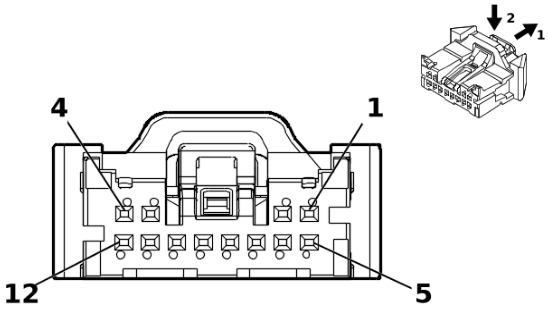
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B174G Frontview Camera - Grille (UVI)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	Coax Cable	—	Front Vision Camera 1 Coaxial Video Signal	I	—

B174W Frontview Camera - Windshield (UEU/UHX)



5360826

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 35068239
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 050 CTS Series(BK)

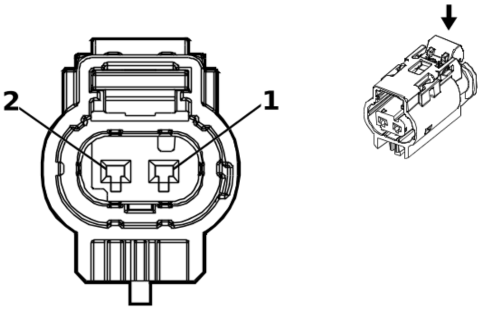
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	EL-35616-58 (BK)	No Tool Required

B174W Frontview Camera - Windshield (UEU/UHX)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK / WH	1851	Signal Ground	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	RD / GN	3140	Battery Positive Voltage	I	—
4	0.35	WH	3152	Lane Departure Warning Indicator Control	I	—
5	0.35	BU / GY	3935	High Speed GMLAN Serial Data [+] 8	I	—
6	0.35	WH / GY	3936	High Speed GMLAN Serial Data [-] 8	I	—
7	0.35	BU / GY	3935	High Speed GMLAN Serial Data [+] 8	I	—
8	0.35	WH / GY	3936	High Speed GMLAN Serial Data [-] 8	I	—
9	0.35	WH / BU	5986	Serial Data Communication Enable	I	—
10	0.35	GY / WH	3153	Lane Departure Warning Disable Switch Signal	I	—
11	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
12	—	—	—	Not Occupied	—	—

B193A Charge Air Cooler Inlet Temperature Sensor



3747581

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13583195
Service Connector: 84727362
Description: 2-Way F 1.2 Multilock Series, Sealed(BK)

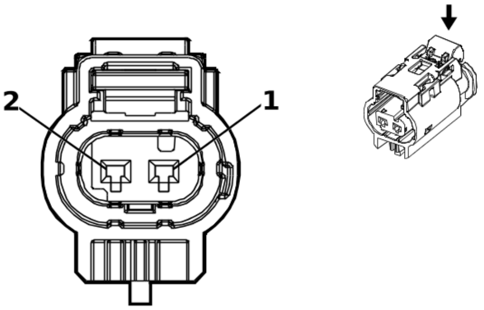
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B193A Charge Air Cooler Inlet Temperature Sensor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN	3683	Charge Air Cooler Inlet Temperature Sensor Signal	I	L5P
2	0.5	YE / BK	3682	Charge Air Cooler Inlet Temperature Sensor Low Reference	I	L5P

B193B Charge Air Cooler Outlet Temperature Sensor (L5P)



3747581

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33226772
Service Connector: 84727362
Description: 2-Way F 1.2 Multilock Series, Sealed(BK)

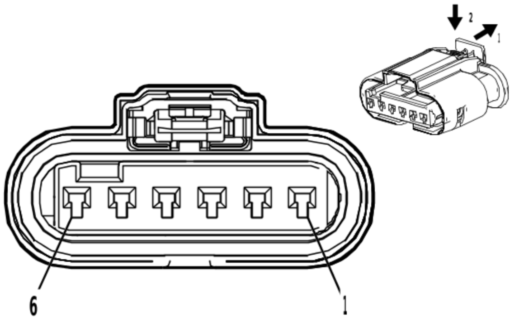
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B193B Charge Air Cooler Outlet Temperature Sensor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN	3681	Charge Air Cooler Outlet Temperature Sensor Signal	I	—
2	0.5	YE / BU	3680	Charge Air Cooler Outlet Temperature Sensor Low Reference	I	—

B195A Nitrogen Oxides Sensor 1 (L5P)



3960142

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33230495
Service Connector: 85005020
Description: 6-Way F 1.2 MCON-LL Series, Sealed(BK)

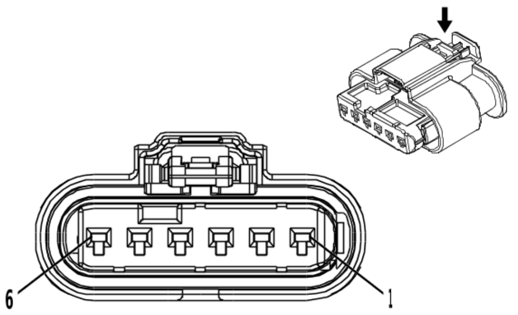
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required
II	Not required	J-35616-16 (L-GN)	No Tool Required

B195A Nitrogen Oxides Sensor 1 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	VT / GN	4320	Powertrain Sensor Bus Enable	II	—
2	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	I	—
3	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	I	—
4	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	I	—
5	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	I	—
6	1	BK / WH	451	Signal Ground	II	—

B195B Nitrogen Oxides Sensor 2 (L5P)



4455148

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33226735
Service Connector: 85526045
Description: 6-Way F 1.2 MCON-LL Series, Sealed(BK)

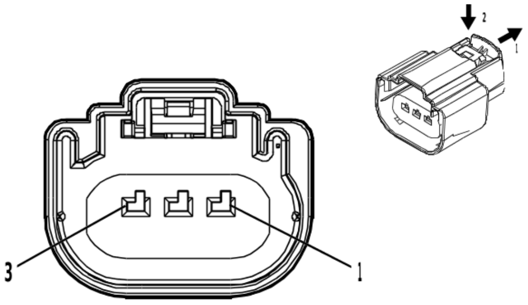
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

B195B Nitrogen Oxides Sensor 2 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	VT / BU	3674	NOx Sensor 1 Control	I	—
2	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	I	—
3	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	I	—
4	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	I	—
5	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	I	—
6	1	BK / WH	1651	Signal Ground	I	—

B198 Fuel Composition Sensor (FHS)



4829227

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33362826
Service Connector: 19371197
Description: 3-Way F 1.5 MX Series, Sealed(GY)

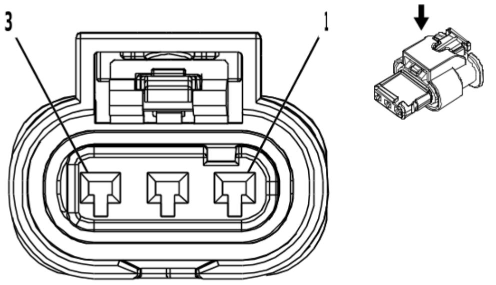
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

B198 Fuel Composition Sensor (FHS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT / GN	4320	Powertrain Sensor Bus Enable	I	—
2	0.5	BK	1750	Ground	I	—
3	0.5	WH	1579	Fuel Temperature/Composition Signal	I	—

B212 Reductant Sensor Module (L5P)



2750649

Connector Part Information

Harness Type: DEF Wiring Harness
OEM Connector: 13722729
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON Series, Sealed(BK)

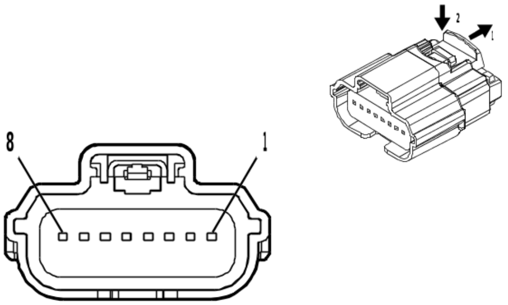
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B212 Reductant Sensor Module (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	7290	Diesel Exhaust Fluid Sensor Voltage Reference 1	I	—
2	—	BN	7284	Diesel Exhaust Fluid Liquid Quality Temperature Signal	I	—
3	—	BK	8434	Diesel Exhaust Fluid Sensor Low Reference	I	—

B218L Side Object Sensor Module - Left (UKC)



4708234

Connector Part Information

Harness Type: Rear Object Alarm Sensor Wiring Harness
OEM Connector: 35198309
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 64 Series, Sealed(BK)

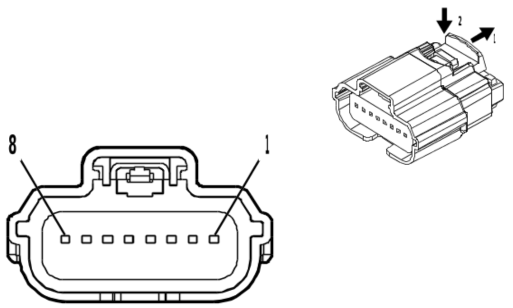
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B218L Side Object Sensor Module - Left (UKC)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BU / YE	3810	High Speed GMLAN Serial Data [-] 5	I	—
2	—	BU / WH	3812	High Speed GMLAN Serial Data [+] 5	I	—
3	—	BK / WH	1751	Signal Ground	I	—
4 - 5	—	—	—	Not Occupied	—	—
6	—	GN	5060	Low Speed GMLAN Serial Data	I	—
7	—	GY / YE	1760	Left Side Object Detection LED Control	I	—
8	—	RD / GN	1840	Battery Positive Voltage	I	—

B218R Side Object Sensor Module - Right (UKC)



4708234

Connector Part Information

Harness Type: Rear Object Alarm Sensor Wiring Harness
OEM Connector: 35198309
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 64 Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B218R Side Object Sensor Module - Right (UKC)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BU / YE	3810	High Speed GMLAN Serial Data [-] 5	I	—
2	—	BU / WH	3812	High Speed GMLAN Serial Data [+] 5	I	—
3	—	BK / WH	1751	Signal Ground	I	—
4 - 5	—	—	—	Not Occupied	—	—
6	—	GN	5060	Low Speed GMLAN Serial Data	I	—
7	—	GY	1761	Right Side Object Detection LED Control	I	—
8	—	RD / GN	1840	Battery Positive Voltage	I	—

B303 Transmission Range Sensor (MGM/MGU)

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Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way

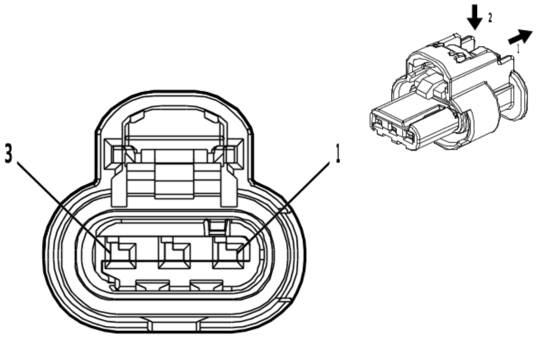
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B303 Transmission Range Sensor (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK / GY	3927	Transmission Internal Mode Switch Feedback Signal	I	—
2	—	YE	5724	Ignition Mode Switch Mode Control	I	—
3	—	YE / GY	5726	Ignition Mode Switch Mode Control Backup	I	—
4	—	OG	4162	Transmission Fluid Pressure Sensor 1 Circuit 5V Reference	I	—

B306A Parking Assist Sensor - Front Left Outer (UD5)



4581126

Connector Part Information

Harness Type: Front Object Alarm Sensor Wiring Harness
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed(BK)

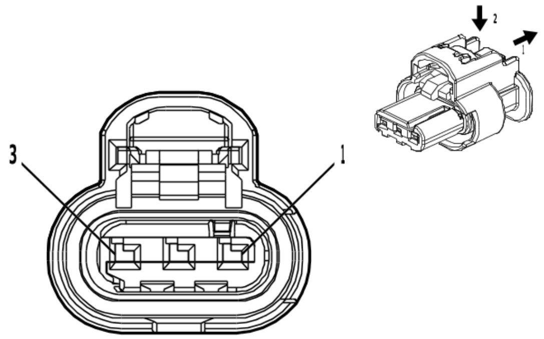
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B306A Parking Assist Sensor - Front Left Outer (UD5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE / VT	5213	Front Left/Right/Middle Parking Assist Sensor	I	—
2	0.5	VT / WH	5215	Left Front Outer Parking Assist Sensor	I	—
3	0.5	BK / BU	5214	Front Parking Assist Sensor Low Reference	I	—

B306B Parking Assist Sensor - Front Left Middle (UD5)



4581126

Connector Part Information

Harness Type: Front Object Alarm Sensor Wiring Harness
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed(BK)

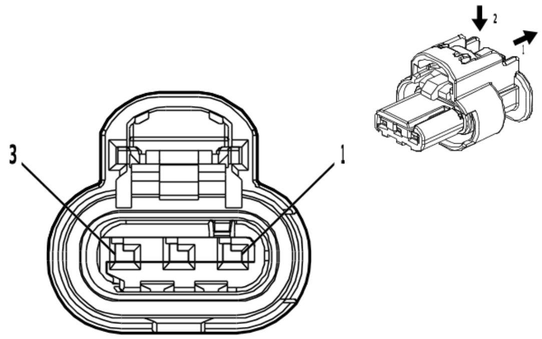
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B306B Parking Assist Sensor - Front Left Middle (UD5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE / VT	5213	Front Left/Right/Middle Parking Assist Sensor	I	—
2	0.5	YE / GY	5216	Left Front Middle Parking Assist Sensor	I	—
3	0.5	BK / BU	5214	Front Parking Assist Sensor Low Reference	I	—

B306C Parking Assist Sensor - Front Right Middle (UD5)



4581126

Connector Part Information

Harness Type: Front Object Alarm Sensor Wiring Harness
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed(BK)

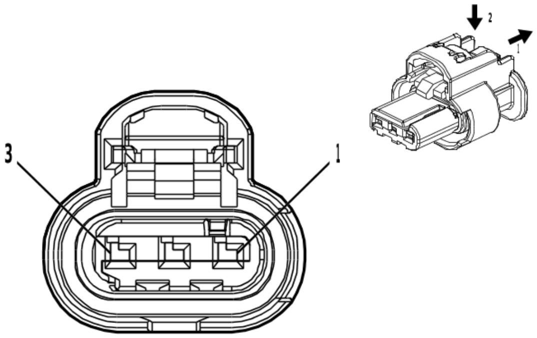
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B306C Parking Assist Sensor - Front Right Middle (UD5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE / VT	5213	Front Left/Right/Middle Parking Assist Sensor	I	—
2	0.5	VT / GY	5218	Right Front Middle Parking Assist Sensor	I	—
3	0.5	BK / BU	5214	Front Parking Assist Sensor Low Reference	I	—

B306D Parking Assist Sensor - Front Right Outer (UD5)



4581126

Connector Part Information

Harness Type: Front Object Alarm Sensor Wiring Harness
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed(BK)

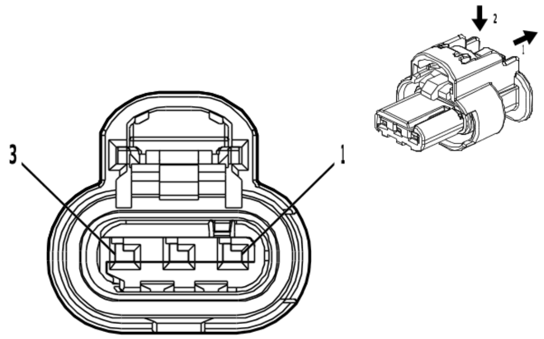
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

B306D Parking Assist Sensor - Front Right Outer (UD5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE / VT	5213	Front Left/Right/Middle Parking Assist Sensor	I	—
2	0.5	WH / GY	5217	Right Front Outer Parking Assist Sensor	I	—
3	0.5	BK / BU	5214	Front Parking Assist Sensor Low Reference	I	—

B306E Parking Assist Sensor - Rear Left Outer (UD5/UD7)



4581126

Connector Part Information

Harness Type: Rear Object Alarm Sensor Wiring Harness
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed(BK)

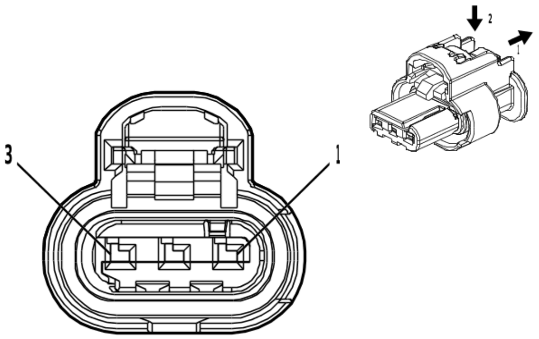
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B306E Parking Assist Sensor - Rear Left Outer (UD5/UD7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BN / WH	2374	Object Sensor Voltage Reference	I	—
2	—	YE	2375	Left Rear Outer Parking Assist Sensor Signal	I	—
3	—	BK / GY	2379	Object Sensor Low Reference	I	—

B306F Parking Assist Sensor - Rear Left Middle (UD5/UD7)



4581126

Connector Part Information

Harness Type: Rear Object Alarm Sensor Wiring Harness
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed(BK)

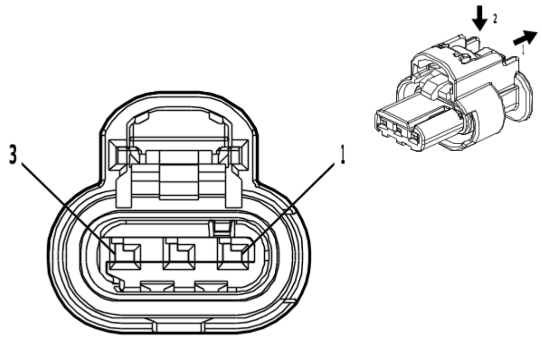
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B306F Parking Assist Sensor - Rear Left Middle (UD5/UD7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BN / WH	2374	Object Sensor Voltage Reference	I	—
2	—	YE / BU	2376	Left Rear Middle Parking Assist Sensor Signal	I	—
3	—	BK / GY	2379	Object Sensor Low Reference	I	—

B306G Parking Assist Sensor - Rear Right Middle (UD5/UD7)



4581126

Connector Part Information

Harness Type: Rear Object Alarm Sensor Wiring Harness
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed(BK)

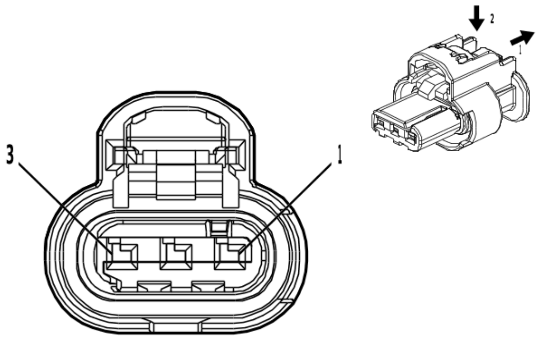
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B306G Parking Assist Sensor - Rear Right Middle (UD5/UD7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BN / WH	2374	Object Sensor Voltage Reference	I	—
2	—	YE / WH	2377	Right Rear Middle Parking Assist Sensor Signal	I	—
3	—	BK / GY	2379	Object Sensor Low Reference	I	—

B306H Parking Assist Sensor - Rear Right Outer (UD5/UD7)



4581126

Connector Part Information

Harness Type: Rear Object Alarm Sensor Wiring Harness
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B306H Parking Assist Sensor - Rear Right Outer (UD5/UD7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BN / WH	2374	Object Sensor Voltage Reference	I	—
2	—	YE / VT	2378	Right Rear Outer Parking Assist Sensor Signal	I	—
3	—	BK / GY	2379	Object Sensor Low Reference	I	—

B310 Fuel Pressure/Temperature Sensor (L8T)

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Connector Part Information

Harness Type: Bake 1 Fuel Rail Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

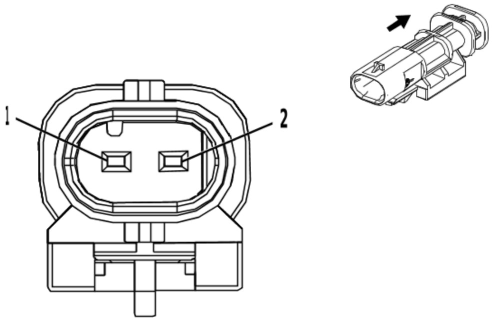
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

B310 Fuel Pressure/Temperature Sensor (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK / YE	548	Engine Control Sensors Low Reference 1	I	—
2	0.5	BU / WH	2918	Fuel Rail Pressure Sensor Signal	I	—
3	0.5	BN / RD	480	Engine Control Vehicle Sensors 5 Volt Reference 1	I	—

E2A Marker Lamp - Endgate



2474755

Connector Part Information

Harness Type: Rear License Plate Lamp Wiring Harness Extension Harness
OEM Connector: 33207247
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 MCON Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

E2A Marker Lamp - Endgate

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY / BN	309	Right Park Lamp Control	I	—
2	0.5	BK	1450	Ground	I	—

E2LF Side Marker Lamp - Left Front

—

Connector Part Information

Harness Type: Left Front Headlamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

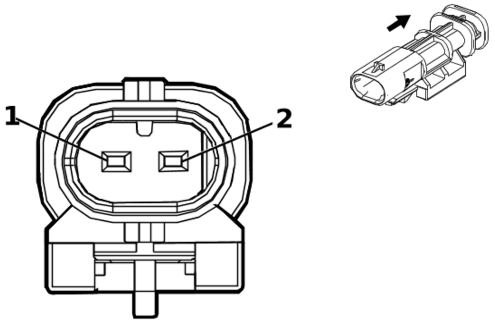
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E2LF Side Marker Lamp - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	709	Left Park Lamp Control	I	—
2	—	BK	150	Ground	I	—
3	—	BK	150	Ground	I	—

E2LR Side Marker Lamp - Left Rear (Z88)



5200722

Connector Part Information

Harness Type: Rear License Plate Lamp Wiring Harness Extension Harness
OEM Connector: 35085132
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 Multilock Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

E2LR Side Marker Lamp - Left Rear (Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	1450	Ground	I	—
2	0.5	VT / GY	709	Left Park Lamp Control	I	—

E2RF Side Marker Lamp - Right Front

—

Connector Part Information

Harness Type: Right Front Headlamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

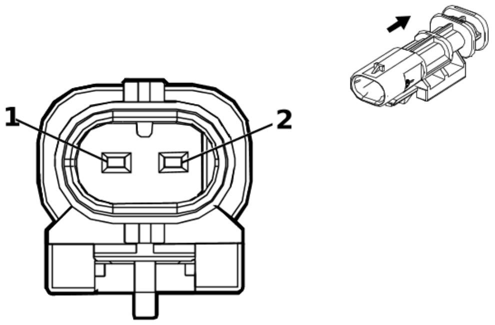
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E2RF Side Marker Lamp - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	309	Right Park Lamp Control	I	—
2	—	BK	250	Ground	I	—
3	—	BK	250	Ground	I	—

E2RR Side Marker Lamp - Right Rear (Z88)



Connector Part Information

Harness Type: Rear License Plate Lamp Wiring Harness Extension Harness
OEM Connector: 35085132
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 Multilock Series, Sealed(BK)

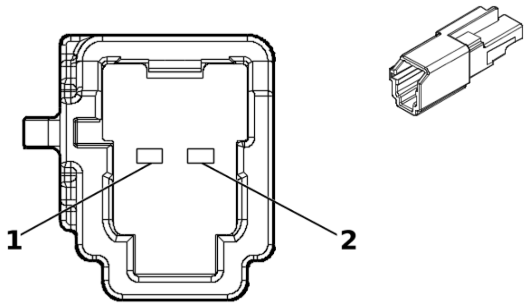
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

E2RR Side Marker Lamp - Right Rear (Z88)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	1750	Ground	I	—
2	0.5	GY / BN	309	Right Park Lamp Control	I	—

E3A Roof Clearance Lamp - Left Front Outer



5355341

Connector Part Information

Harness Type: Headliner Wiring Harness
OEM Connector: 35258943
Service Connector: 84815531
Description: 2-Way M 1.2 MCON Series(BK)

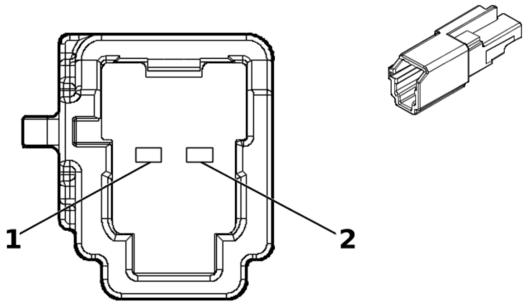
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

E3A Roof Clearance Lamp - Left Front Outer

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1050	Ground	I	—
2	0.35	VT / GY	709	Left Park Lamp Control	I	—

E3C Roof Clearance Lamp - Front Middle



5355341

Connector Part Information

Harness Type: Headliner Wiring Harness
OEM Connector: 35258943
Service Connector: 84815531
Description: 2-Way M 1.2 MCON Series(BK)

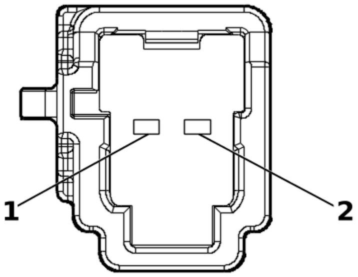
Terminal Part Information

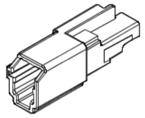
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

E3C Roof Clearance Lamp - Front Middle

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1050	Ground	I	—
2	0.35	VT / GY	709	Left Park Lamp Control	I	—

E3E Roof Clearance Lamp - Right Front Outer





5355341

Connector Part Information

Harness Type: Headliner Wiring Harness
OEM Connector: 35258943
Service Connector: 84815531
Description: 2-Way M 1.2 MCON Series(BK)

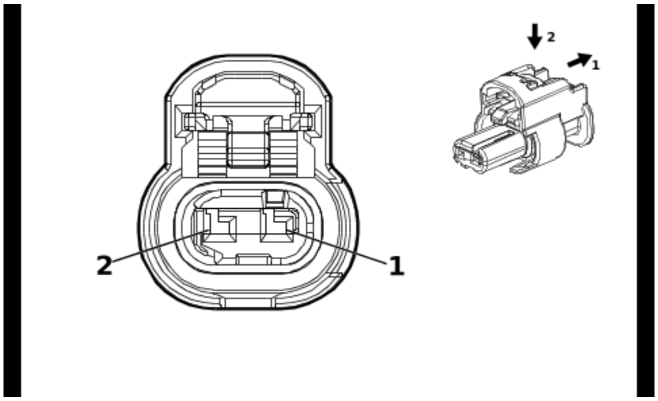
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

E3E Roof Clearance Lamp - Right Front Outer

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BK	1050	Ground	I	—
2	0.35	VT / GY	709	Left Park Lamp Control	I	—

E3LF Rear Fender Clearance Lamp - Left Front



4649903

Connector Part Information

Harness Type: Rear License Plate Lamp Wiring Harness Extension Harness
OEM Connector: 33327048
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

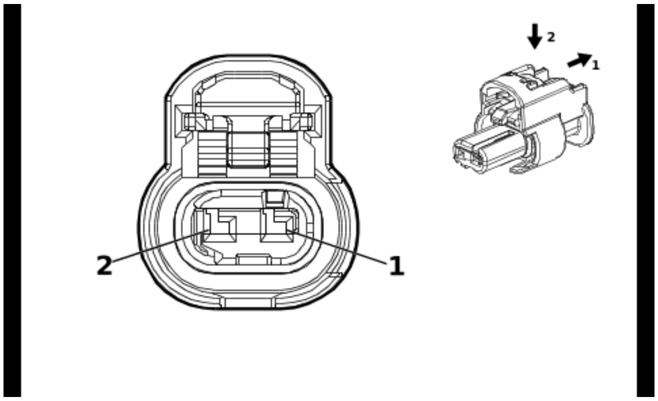
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

E3LF Rear Fender Clearance Lamp - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT / GY	709	Left Park Lamp Control	I	—
2	0.5	BK	1450	Ground	I	—

E3LR Rear Fender Clearance Lamp - Left Rear



4649903

Connector Part Information

Harness Type: Rear License Plate Lamp Wiring Harness Extension Harness
OEM Connector: 33327048
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

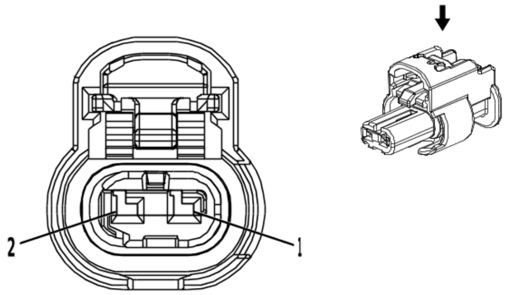
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E3LR Rear Fender Clearance Lamp - Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	VT / GY	709	Left Park Lamp Control	I	—
2	—	BK	1450	Ground	I	—

E3RF Rear Fender Clearance Lamp - Right Front



4335931

Connector Part Information

Harness Type: Rear License Plate Lamp Wiring Harness Extension Harness
OEM Connector: 33371691
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

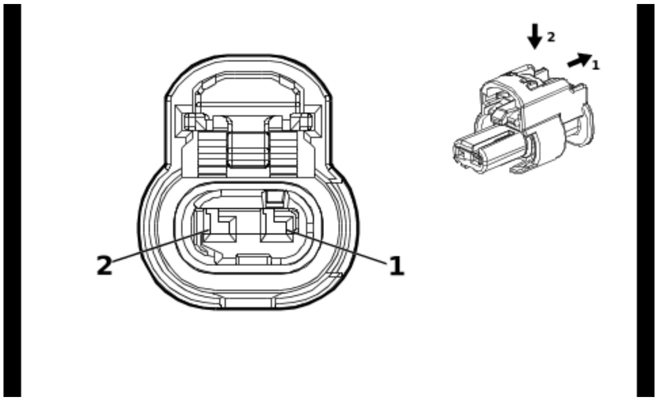
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

E3RF Rear Fender Clearance Lamp - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	1750	Ground	I	—
2	0.5	GY / BN	309	Right Park Lamp Control	I	—

E3RR Rear Fender Clearance Lamp - Right Rear



4649903

Connector Part Information

Harness Type: Rear License Plate Lamp Wiring Harness Extension Harness
OEM Connector: 33327048
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

E3RR Rear Fender Clearance Lamp - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY / BN	309	Right Park Lamp Control	I	—
2	0.5	BK	1750	Ground	I	—

E4E Headlamp - Left High Beam

—

Connector Part Information

Harness Type: Left Headlamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E4E Headlamp - Left High Beam

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	711	Left Headlamp High Beam Control	I	—
2	—	BK	150	Ground	I	—

E4F Headlamp - Right High Beam

—

Connector Part Information

Harness Type: Right Headlamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E4F Headlamp - Right High Beam

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	311	Right Headlamp High Beam Control	I	—
2	—	BK	250	Ground	I	—

E4G Headlamp - Left Low Beam

—

Connector Part Information

Harness Type: Left Headlamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E4G Headlamp - Left Low Beam

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	712	Left Headlamp Low Beam Control	I	—
2	—	BK	150	Ground	I	—

E4H Headlamp - Right Low Beam

—

Connector Part Information

Harness Type: Right Headlamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E4H Headlamp - Right Low Beam

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	312	Right Headlamp Low Beam Control	I	—
2	—	BK	250	Ground	I	—

E4LF Turn Signal Lamp - Left Front

—

Connector Part Information

Harness Type: Left Headlamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E4LF Turn Signal Lamp - Left Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	150	Ground	I	—
2	—	BK	150	Ground	I	—
3	—	BK	1314	Left Front Turn Signal Lamp Control	I	—

E4N Park/Turn Signal Lamp - Left

—

Connector Part Information

Harness Type: Left Headlamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E4N Park/Turn Signal Lamp - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	709	Left Park Lamp Control	I	—
2	—	BK	1314	Left Front Turn Signal Lamp Control	I	—
3	—	BK	150	Ground	I	—

E4P Park/Turn Signal Lamp - Right

—

Connector Part Information

Harness Type: Right Headlamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E4P Park/Turn Signal Lamp - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	309	Right Park Lamp Control	I	—
2	—	BK	1315	Right Front Turn Signal Lamp Control	I	—
3	—	BK	250	Ground	I	—

E4RF Turn Signal Lamp - Right Front

—

Connector Part Information

Harness Type: Right Headlamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E4RF Turn Signal Lamp - Right Front

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	250	Ground	I	—
3	—	BK	1315	Right Front Turn Signal Lamp Control	I	—

E5A Backup Lamp - Left

—

Connector Part Information

Harness Type: Right Rear Tail Lamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E5A Backup Lamp - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	GN	24	Backup Lamp Control	I	—
2	—	BK	1450	Ground	I	—

E5B Backup Lamp - Right

—

Connector Part Information

Harness Type: Right Rear Tail Lamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

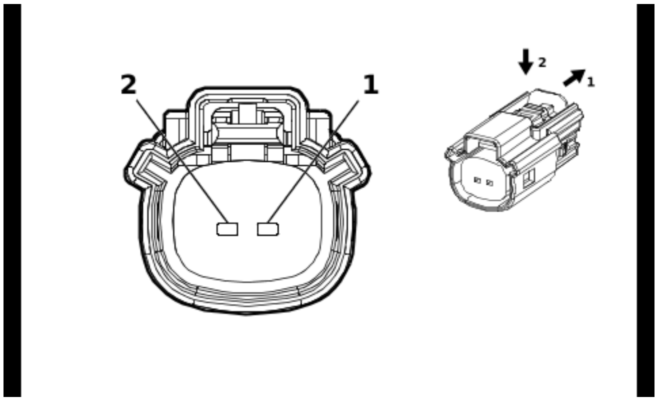
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E5B Backup Lamp - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	GN	24	Backup Lamp Control	I	—
2	—	BK	1750	Ground	I	—

E5F Tail Lamp - Right



2474713

Connector Part Information

Harness Type: Tail Lamp Wiring Harness
OEM Connector: 33471-0206
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.5 Series, Sealed(BK)

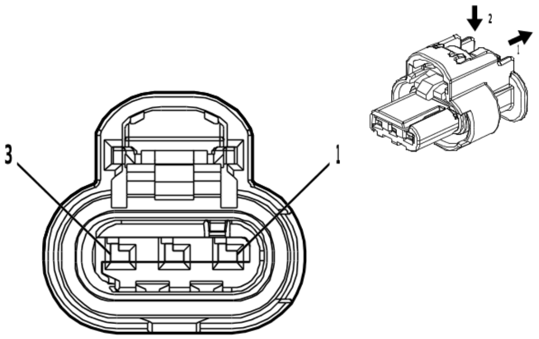
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

E5F Tail Lamp - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	18	BK	—	—	I	—
2	18	BN	—	—	I	—

E6 Center High Mounted Stop Lamp (Crew Cab/Extended Cab)



4581126

Connector Part Information

Harness Type: Inside Rearview Mirror Wiring Harness
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed(BK)

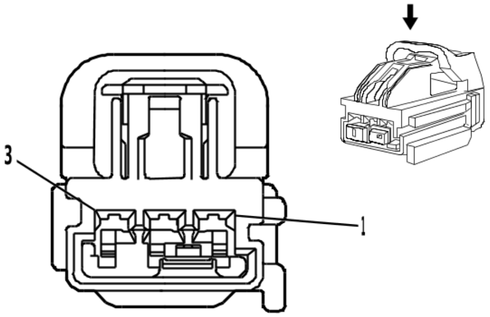
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

E6 Center High Mounted Stop Lamp (Crew Cab/Extended Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH / VT	1430	Exterior Courtesy Lamp Control	I	—
2	0.35	VT / WH	5065	Stop Lamp Relay Coil Control	I	—
3	0.35	BK	1050	Ground	I	—

E6 Center High Mounted Stop Lamp (Regular Cab)



1787799

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 10847008
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.5 Kaizen Series(L-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

E6 Center High Mounted Stop Lamp (Regular Cab)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH / VT	1430	Exterior Courtesy Lamp Control	I	—
2	0.5	VT / GY	1054	Stop Lamp Control	I	—
3	0.35	BK	1050	Ground	I	—

E7 License Plate Lamp (ZW9)

—

Connector Part Information

Harness Type: License Plate Jumper Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

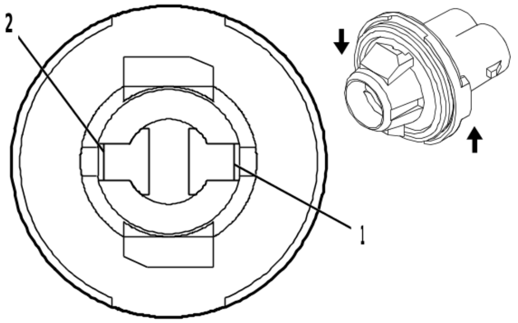
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E7 License Plate Lamp (ZW9)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	GN / YE	6846	Rear License Plate Lamp Control	I	—
2	—	BK	1450	Ground	I	—
A	—	GN / YE	6846	Rear License Plate Lamp Control	I	—
B	—	BK	1450	Ground	I	—

E7L License Plate Lamp - Left (E63)



5153536

Connector Part Information

Harness Type: Rear Object Alarm Sensor Wiring Harness
OEM Connector: 15324946
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F Lamp Socket Wedge Base, Type W-2(D-GY)

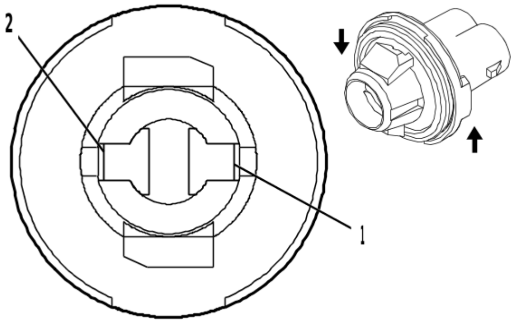
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E7L License Plate Lamp - Left (E63)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	GN / YE	6846	Rear License Plate Lamp Control	I	—
2	—	BK	1450	Ground	I	—
B	—	BK	1450	Ground	I	—

E7R License Plate Lamp - Right (E63)



5153536

Connector Part Information

Harness Type: Rear Object Alarm Sensor Wiring Harness
OEM Connector: 15324946
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F Lamp Socket Wedge Base, Type W-2(D-GY)

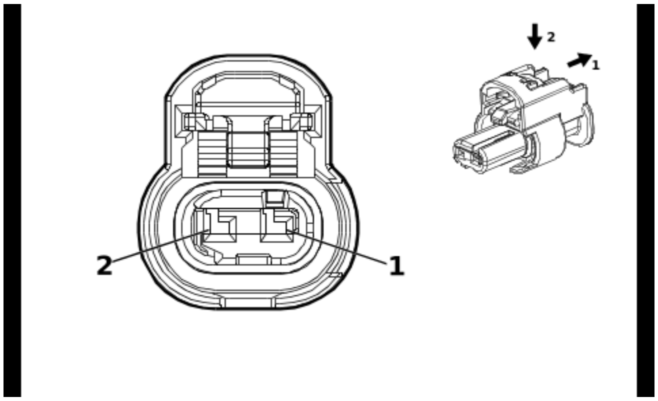
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E7R License Plate Lamp - Right (E63)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	GN / YE	6846	Rear License Plate Lamp Control	I	—
2	—	BK	1450	Ground	I	—
B	—	BK	1450	Ground	I	—

E8L Liftgate Courtesy Lamp (QT5/QT6)



4649903

Connector Part Information

Harness Type: Endgate Wiring Harness
OEM Connector: 33327048
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

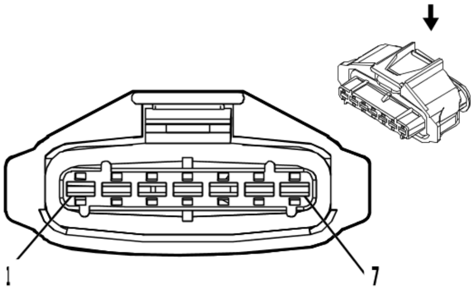
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required
II	Not required	J-35616-16 (L-GN)	No Tool Required

E8L Liftgate Courtesy Lamp (QT5/QT6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH / VT	1430	Exterior Courtesy Lamp Control	II	—
2	0.75	BK	1450	Ground	I	—

E11A Fuel Heater/Water in Fuel Sensor (L5P)



2537256

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 10774827
Service Connector: 19354080
Description: 7-Way F 2.8 Junior Power Timer Series, Sealed(BK)

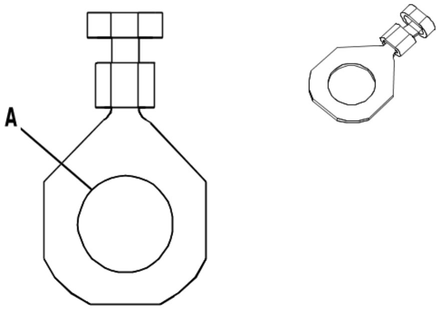
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

E11A Fuel Heater/Water in Fuel Sensor (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BK	1750	Ground	I	—
2	2.5	VT / GN	355	Fuel Filter Heater Control Circuit	I	—
3	0.5	WH / RD	6862	Water In Fuel Sensor Voltage Reference	I	—
4	0.5	BK / BU	6863	Water In Fuel Sensor Low Reference	I	—
5	0.5	BU / YE	6861	Water In Fuel Sensor Signal	I	—
6	0.5	BN / VT	455	Fuel Filter Temperature Signal	I	—
7	0.5	BK / VT	412	Fuel Filter Temperature Sensor Low Reference	I	—

E12A Glow Plug 1



3240148

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 12103520
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

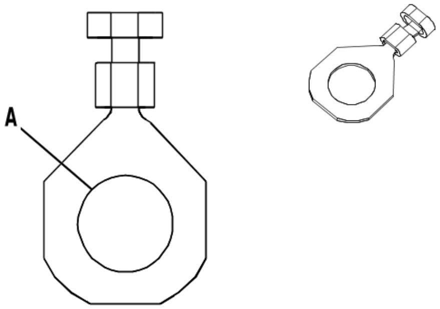
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E12A Glow Plug 1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GY / BU	1581	Glow Plug 1 Control	I	L5P

E12B Glow Plug 2



3240148

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 12103520
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

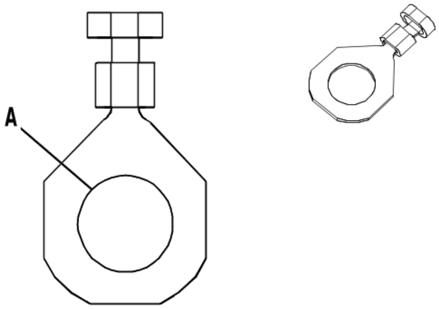
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E12B Glow Plug 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GY / BN	1582	Glow Plug 2 Control	I	L5P

E12C Glow Plug 3



3240148

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 12103520
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

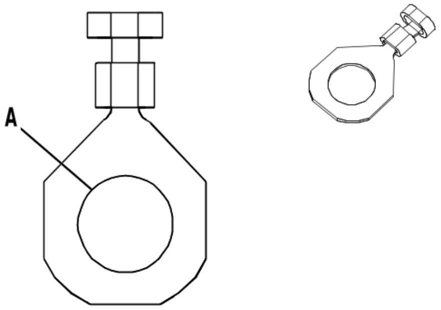
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E12C Glow Plug 3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GY / GN	1583	Glow Plug 3 Control	I	L5P

E12D Glow Plug 4



3240148

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 12103520
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

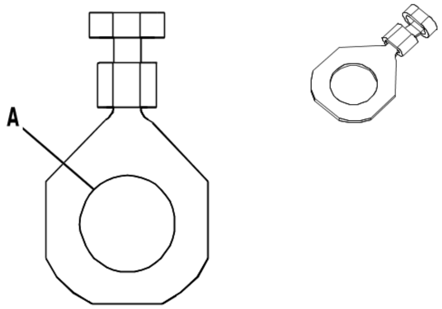
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E12D Glow Plug 4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GY / YE	1584	Glow Plug 4 Control	I	L5P

E12E Glow Plug 5



3240148

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 12103520
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

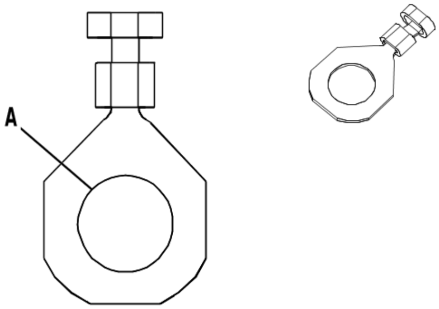
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E12E Glow Plug 5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GY / WH	1585	Glow Plug 5 Control	I	L5P

E12F Glow Plug 6



Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 12103520
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

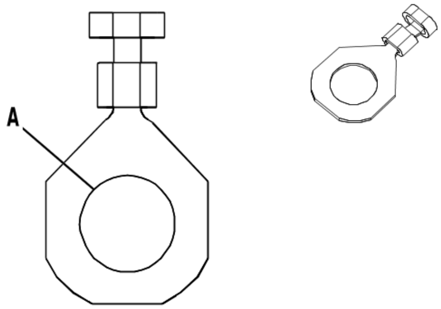
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E12F Glow Plug 6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	GY / VT	1586	Glow Plug 6 Control	I	L5P

E12G Glow Plug 7



3240148

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 12103520
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

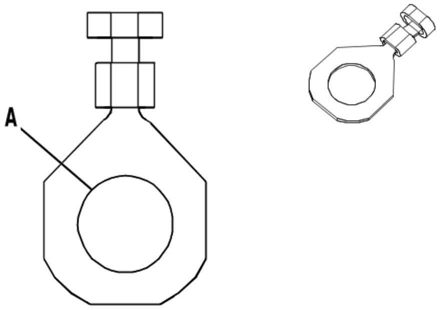
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E12G Glow Plug 7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	WH / BK	1587	Glow Plug 7 Control	I	L5P

E12H Glow Plug 8



3240148

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 12103520
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

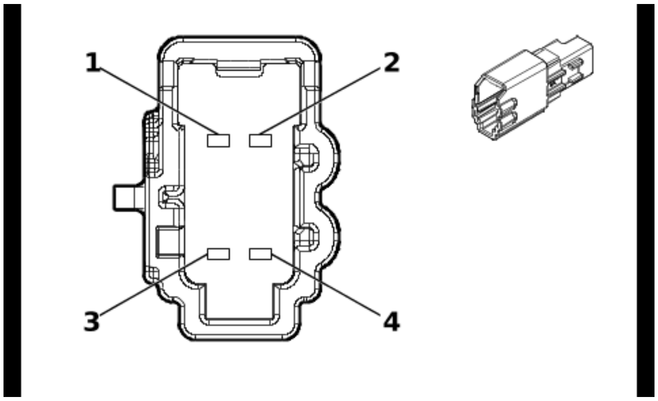
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E12H Glow Plug 8

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2	WH / BU	1588	Glow Plug 8 Control	I	L5P

E14A Seat Heating Element - Driver Back



5423974

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 6098-9049
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 MCON Series(GY)

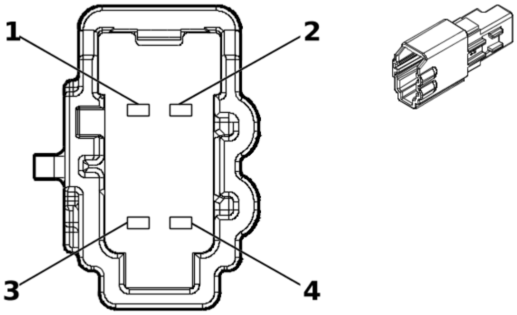
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-13 (BU)	No Tool Required
II	Not required	J-35616-17 (L-GN)	No Tool Required

E14A Seat Heating Element - Driver Back

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN	2432	Driver Seat Back Heating Element Control	I	—
2	0.5	BU	2425	Driver Seat Back Heating Temperature Sensor Signal	II	—
3	0.5	BK / VT	2426	Driver Heated Back Thermistor Low Reference	II	—
4	0.75	BN / BK	2078	Driver Seat Heating Element Low Reference	I	—

E14B Seat Heating Element - Driver Cushion



5360963

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 6098-9046
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 MCON Series(BK)

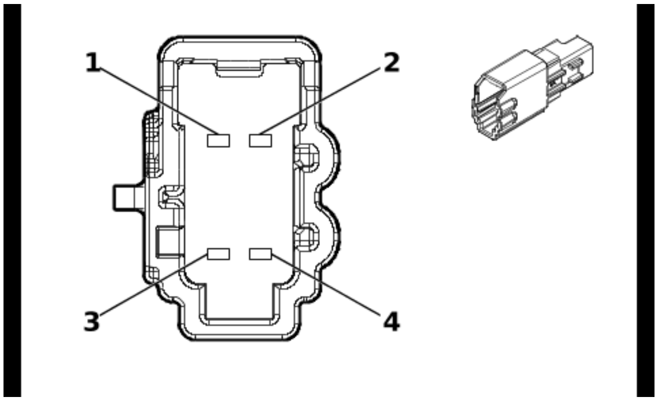
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-13 (BU)	No Tool Required
II	Not required	J-35616-17 (L-GN)	No Tool Required

E14B Seat Heating Element - Driver Cushion

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN / VT	2077	Driver Seat Heating Element Control	I	—
2	0.5	YE / GY	2079	Driver Seat Heating Temperature Sensor Signal	II	—
3	0.5	BK / YE	2080	Driver Heated Seat Thermistor Low Reference	II	—
4	0.75	BN / BK	2078	Driver Seat Heating Element Low Reference	I	—

E14C Seat Heating Element - Passenger Back (KA1)



5423974

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 6098-9049
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 MCON Series(GY)

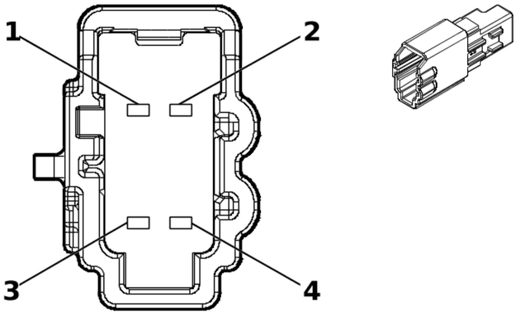
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-13 (BU)	No Tool Required
II	Not required	J-35616-17 (L-GN)	No Tool Required

E14C Seat Heating Element - Passenger Back (KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	WH / BN	2481	Passenger Seat Back Heating Element Control	I	—
2	0.5	WH / BU	2436	Passenger Seat Back Heating Temperature Sensor Signal	II	—
3	0.5	BK / GN	2482	Passenger Heated Back Thermistor Low Reference	II	—
4	0.75	GY / BK	2480	Passenger Seat Heating Element Low Reference	I	—

E14D Seat Heating Element - Passenger Cushion (KA1)



5360963

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 6098-9046
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 MCON Series(BK)

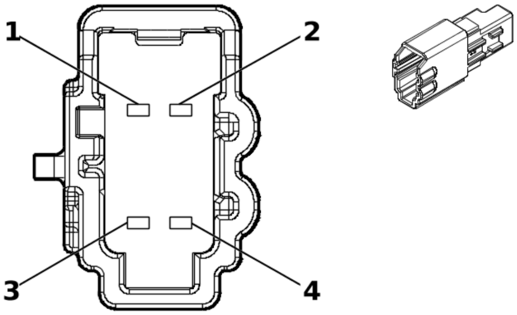
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-13 (BU)	No Tool Required
II	Not required	J-35616-17 (L-GN)	No Tool Required

E14D Seat Heating Element - Passenger Cushion (KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN / BU	2479	Passenger Seat Heating Element Control	I	—
2	0.5	WH / GY	2434	Passenger Seat Heating Temperature Sensor Signal	II	—
3	0.5	BK / GY	2435	Passenger Heated Seat Thermistor Low Reference	II	—
4	0.75	GY / BK	2480	Passenger Seat Heating Element Low Reference	I	—

E14F Seat Heating Element - Left Rear Cushion (KA6)



5360963

Connector Part Information

Harness Type: Second Row Seat Heater Control Wiring Harness
OEM Connector: 6098-9046
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 MCON Series(BK)

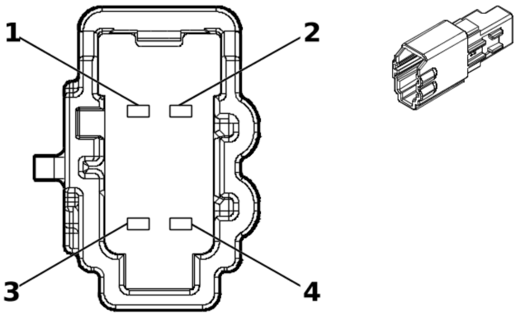
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-13 (BU)	No Tool Required

E14F Seat Heating Element - Left Rear Cushion (KA6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY	2294	Left Rear Seat Cushion Heating Element Control	I	—
2	0.75	WH / BU	7047	Left Rear Seat Cushion Temperature Sensor Signal	I	—
3	0.75	BU / WH	7048	Left Rear Cushion Thermistor Feedback Signal	I	—
4	0.75	BN / BK	2295	Left Rear Seat Cushion Heating Element Low Reference	I	—

E14H Seat Heating Element - Right Rear Cushion (KA6)



5360963

Connector Part Information

Harness Type: Second Row Seat Heater Control Wiring Harness
OEM Connector: 6098-9046
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 MCON Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-13 (BU)	No Tool Required

E14H Seat Heating Element - Right Rear Cushion (KA6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GN / BN	2296	Right Rear Seat Cushion Heating Element Control	I	—
2	0.75	YE / WH	7053	Right Rear Seat Cushion Temperature Sensor Signal	I	—
3	0.75	WH / BK	7054	Right Rear Cushion Thermistor Feedback Signal	I	—
4	0.75	GN / BK	2297	Right Rear Seat Cushion Heating Element Low Reference	I	—

E17D Outside Rearview Mirror Glass - Driver

—

Connector Part Information

Harness Type: Mirror Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E17D Outside Rearview Mirror Glass - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	1150	Ground	I	—
3	—	BK	1150	Ground	I	—

E17P Outside Rearview Mirror Glass - Passenger

—

Connector Part Information

Harness Type: Mirror Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

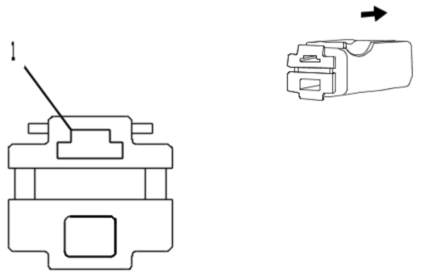
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E17P Outside Rearview Mirror Glass - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK / YE	1761	Right Side Object Detection LED Control	I	—
3	—	BK / WH	1250	Ground	I	—

E18 Rear Defogger Grid X1 (C49)



1413086

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 13511619
Service Connector: 19367647
Description: 1-Way F 250 Series(BK)

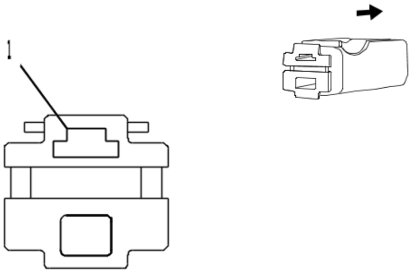
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-42 (RD)	No Tool Required

E18 Rear Defogger Grid X1 (C49)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BN / VT	293	Rear Defogger Grid Control	I	—

E18 Rear Defogger Grid X2 (C49)



1413086

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 13511619
Service Connector: 19367647
Description: 1-Way F 250 Series(BK)

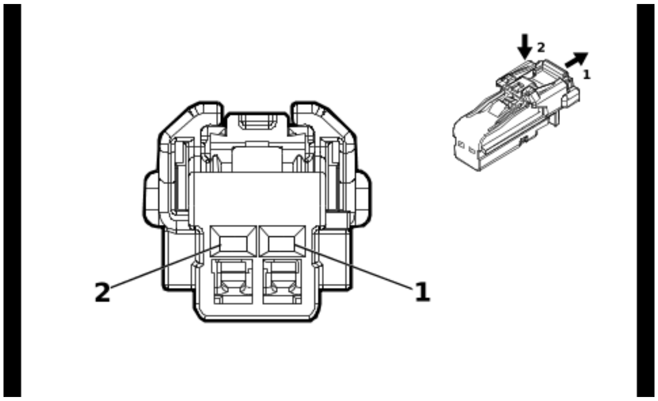
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-42 (RD)	No Tool Required

E18 Rear Defogger Grid X2 (C49)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BK	1350	Ground	I	—

E28 Center Console Compartment Lamp (D07)



4115691

Connector Part Information

Harness Type: Front Floor Console Wiring Harness
OEM Connector: 35311666
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series(BK)

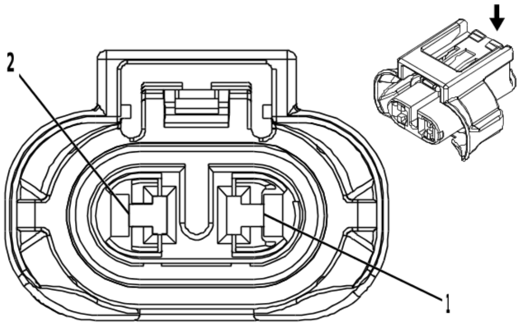
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

E28 Center Console Compartment Lamp (D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	1250	Ground	I	—
2	0.5	WH / BN	6815	Inadvertent Load Control	I	—

E29LF Fog Lamp - Left Front (T3U)



3404058

Connector Part Information

Harness Type: Front Object Alarm Sensor Wiring Harness
OEM Connector: 13930730
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 APEX Series, Sealed(BK)

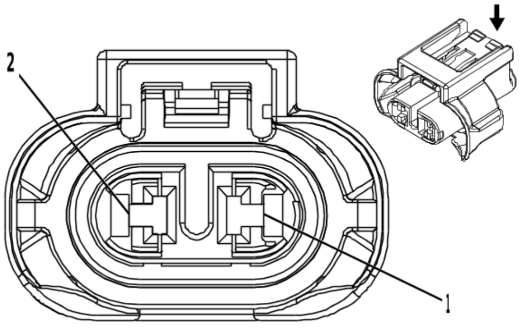
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required

E29LF Fog Lamp - Left Front (T3U)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN / VT	2234	Front Fog Lamp Control	I	—
2	0.5	BK	150	Ground	I	—

E29RF Fog Lamp - Right Front (T3U)



3404058

Connector Part Information

Harness Type: Front Object Alarm Sensor Wiring Harness
OEM Connector: 13930730
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 APEX Series, Sealed(BK)

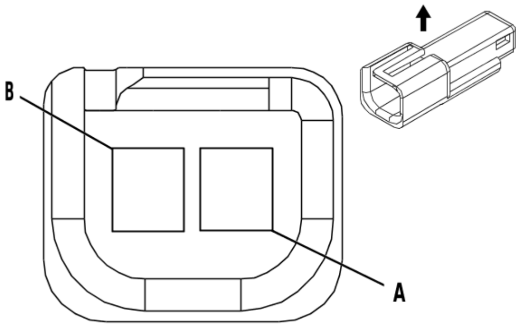
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required

E29RF Fog Lamp - Right Front (T3U)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN / VT	2234	Front Fog Lamp Control	I	—
2	0.5	BK	250	Ground	I	—

E31L Sunshade Mirror Lamp - Left (DH6)



35441

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 12047663
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 150 Metri-Pack Series(BK)

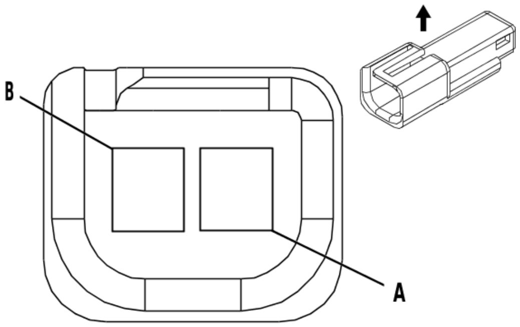
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-3 (GY)	No Tool Required

E31L Sunshade Mirror Lamp - Left (DH6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	WH / BN	6815	Inadvertent Load Control	I	—
B	0.5	BK	1050	Ground	I	—

E31R Sunshade Mirror Lamp - Right (DH6)



35441

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 12047663
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 150 Metri-Pack Series(BK)

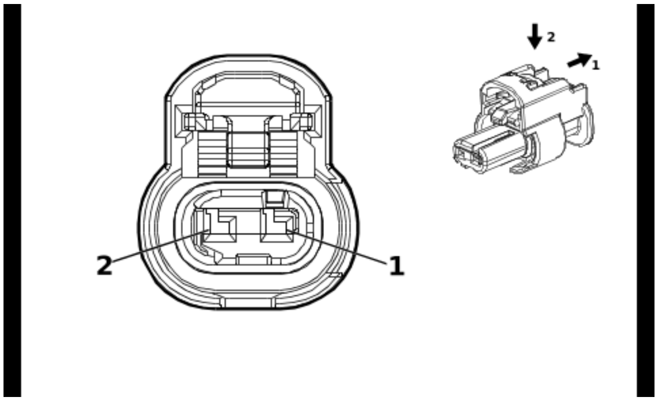
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-3 (GY)	No Tool Required

E31R Sunshade Mirror Lamp - Right (DH6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5	WH / BN	6815	Inadvertent Load Control	I	—
B	0.5	BK	1050	Ground	I	—

E33L Cargo Lamp - Left



4649903

Connector Part Information

Harness Type: Tail Lamp Wiring Harness
OEM Connector: 1-2296694-1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

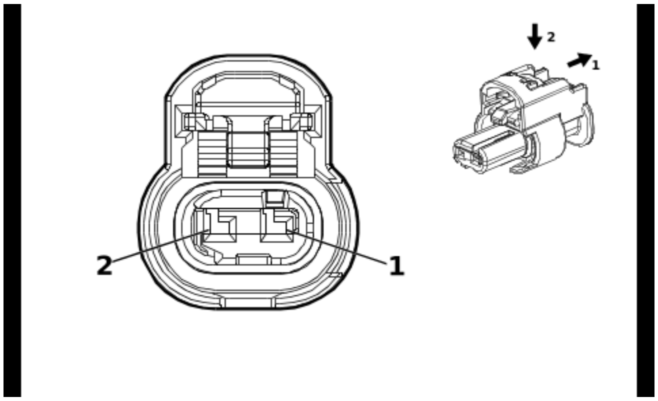
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E33L Cargo Lamp - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BU	7762	Cargo Lamp Control	I	—
2	—	BK	1450	Ground	I	—

E33R Cargo Lamp - Right



4649903

Connector Part Information

Harness Type: Tail Lamp Wiring Harness
OEM Connector: 1-2296694-1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

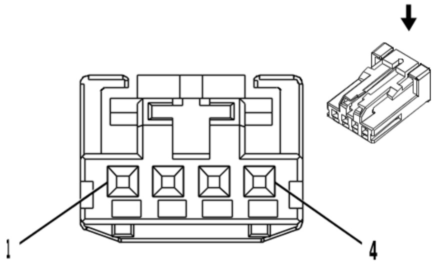
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

E33R Cargo Lamp - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	18	BU	7762	Cargo Lamp Control	I	—
2	18	BK	1750	Ground	I	—

E37B Dome/Reading Lamps - 2nd Row



2717162

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 13969166
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64 Micro-Quadlock Series(BK)

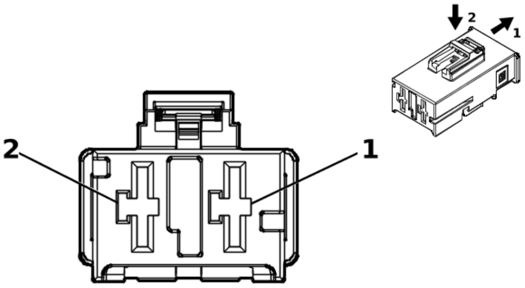
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

E37B Dome/Reading Lamps - 2nd Row

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD / YE	240	Battery Positive Voltage	I	—
2	0.35	GY	157	Interior Lamp Control	I	—
3	0.5	BK	1050	Ground	I	—
4	0.5	WH / BN	6815	Inadvertent Load Control	I	—

E40 Electrical Auxiliary Heater X1 (C32)



5187955

Connector Part Information

Harness Type: Electrical Auxiliary Heater Jumper
OEM Connector: 13525311
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 9.5 MCON-LL Series(BK)

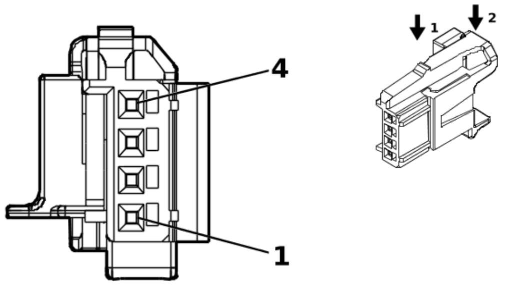
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E40 Electrical Auxiliary Heater X1 (C32)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	—	I	—
2	—	—	—	—	I	—

E40 Electrical Auxiliary Heater X2 (C32)



Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 33358011
Service Connector: 84724190
Description: 4-Way F 0.64 Micro-Quadlock Series(BK)

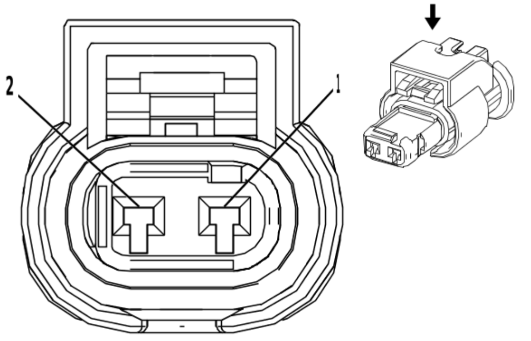
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

E40 Electrical Auxiliary Heater X2 (C32)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT	3195	Auxiliary Heater Control	I	—
2	0.5	VT / GY	539	Run/Crank Ignition 1 Voltage	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	BK	1050	Ground	I	—

E52 Reductant Line Heater (L5P)



2474752

Connector Part Information

Harness Type: DEF Wiring Harness
OEM Connector: 13927761
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed(BK with BK Inner Connector)

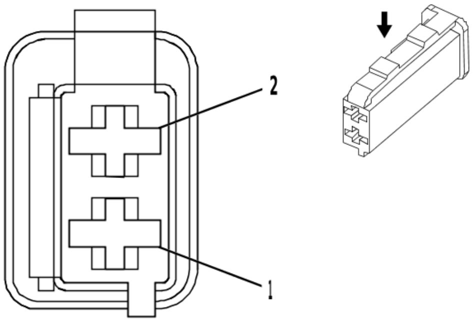
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E52 Reductant Line Heater (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	WH	3199	Diesel Exhaust Fluid Pressure Line Heater Control	I	—
2	—	BN	4319	Diesel Exhaust Fluid Line Heater Low Control	I	—

E63D Flood Lamp - Driver Door Handle (AU3)



2339593

Connector Part Information

Harness Type: Driver Door Trim Wiring Harness
OEM Connector: 13670097
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.6 Timer Series(BK)

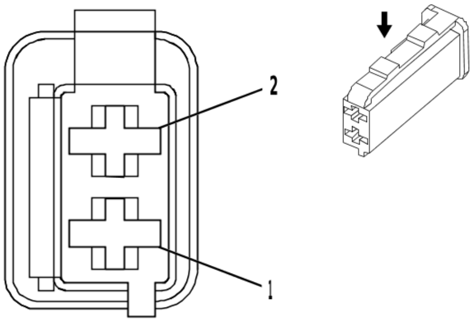
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

E63D Flood Lamp - Driver Door Handle (AU3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH / YE	7557	Interior Door Handle Accent Lighting Control	I	—
2	0.35	BK	1150	Ground	I	—

E63P Flood Lamp - Passenger Door Handle (AU3)



2339593

Connector Part Information

Harness Type: Passenger Door Trim Wiring Harness
OEM Connector: 13670097
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.6 Timer Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

E63P Flood Lamp - Passenger Door Handle (AU3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH / YE	7557	Interior Door Handle Accent Lighting Control	I	—
2	0.75	BK	1250	Ground	I	—

E70D Outside Rearview Mirror Cargo Lamp - Driver

—

Connector Part Information

Harness Type: Door Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E70D Outside Rearview Mirror Cargo Lamp - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK / WH	1150	Ground	I	—
2	—	YE / BK	968	Auxiliary 4 Control	I	DWI/ DZC

E70P Outside Rearview Mirror Cargo Lamp - Passenger

—

Connector Part Information

Harness Type: Door Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E70P Outside Rearview Mirror Cargo Lamp - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK / WH	1250	Ground	I	—
2	—	YE / BK	968	Auxiliary 4 Control	I	—

E90DF Exterior Flood Lamp - Driver Outside Rearview Mirror Forward

—

Connector Part Information

Harness Type: Door Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

E90DF Exterior Flood Lamp - Driver Outside Rearview Mirror Forward

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	— —	BK BK / WH	1150 1150	Ground Ground	I I	DLF/ DZC DWI/ DLF/ DZC
2	—	OG	2082	Puddle Lamp Control	I	—
4	—	BK	1150	Ground	I	—

F101 Passenger Instrument Panel Air Bag X1

—

Connector Part Information

Harness Type: Passenger Air Bag Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

F101 Passenger Instrument Panel Air Bag X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	YE / OG	3025	Passenger Instrument Panel Air Bag Stage 1 High Control	I	—
2	—	OG / WH	3024	Passenger Instrument Panel Air Bag Stage 1 Low Control	I	—

F101 Passenger Instrument Panel Air Bag X2

—

Connector Part Information

Harness Type: Passenger Air Bag Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

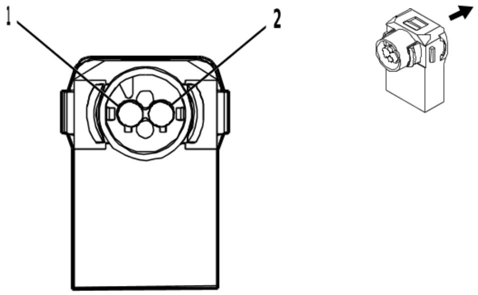
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

F101 Passenger Instrument Panel Air Bag X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	GY / OG	3027	Passenger Instrument Panel Air Bag Stage 2 High Control	I	—
2	—	OG / VT	3026	Passenger Instrument Panel Air Bag Stage 2 Low Control	I	—

F105L Roof Rail Air Bag - Left



4679778

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33345783
Service Connector: 19355491
Description: 2-Way F ABX-5 Series(GY with YE Cover)

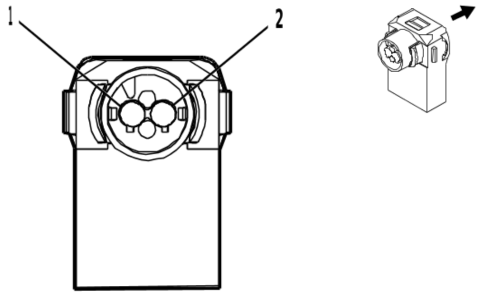
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

F105L Roof Rail Air Bag - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG / GN	5019	Left Front Roof Rail Air Bag High Control	I	—
2	0.5	VT / OG	5020	Left Front Roof Rail Air Bag Low Control	I	—

F105R Roof Rail Air Bag - Right



4679778

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33345783
Service Connector: 19355491
Description: 2-Way F ABX-5 Series(GY with YE Cover)

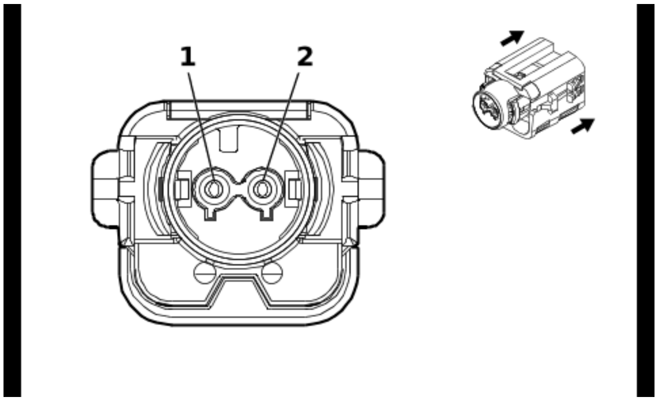
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

F105R Roof Rail Air Bag - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG / GY	5021	Right Front Roof Rail Air Bag High Control	I	—
2	0.5	WH / OG	5022	Right Front Roof Rail Air Bag Low Control	I	—

F106D Seat Side Air Bag - Driver



Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 35212936
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F ABX-5 Series(PK with YE Cover)

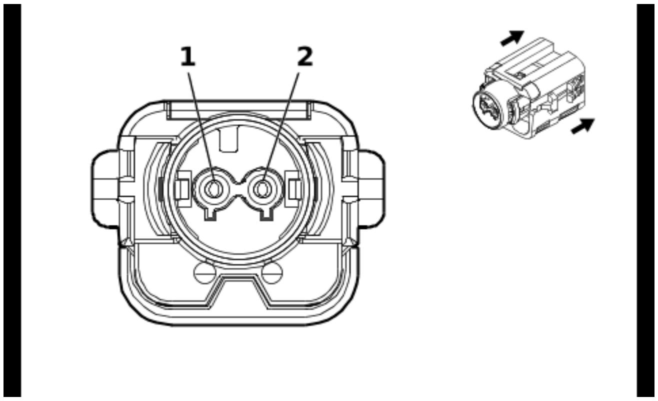
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-10 (GN)	No Tool Required

F106D Seat Side Air Bag - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG / BU	3068	Driver Seat Side Air Bag High Control	I	—
2	0.5	GN / OG	3069	Driver Seat Side Air Bag Low Control	I	—

F106P Seat Side Air Bag - Passenger



5499727

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 35212936
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F ABX-5 Series(PK with YE Cover)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-10 (GN)	No Tool Required

F106P Seat Side Air Bag - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG / GY	3066	Passenger Seat Side Air Bag High Control	I	—
2	0.5	BN / OG	3067	Passenger Seat Side Air Bag Low Control	I	—

F107 Steering Wheel Air Bag X1

—

Connector Part Information

Harness Type: Steering Wheel Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

F107 Steering Wheel Air Bag X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	YE / OG	3021	Steering Wheel Air Bag Stage 1 High Control	I	—
2	—	OG / WH	3020	Steering Wheel Air Bag Stage 1 Low Control	I	—

F107 Steering Wheel Air Bag X2

—

Connector Part Information

Harness Type: Steering Wheel Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

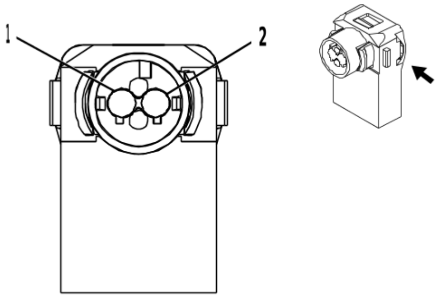
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

F107 Steering Wheel Air Bag X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	GY / OG	3023	Steering Wheel Air Bag Stage 2 High Control	I	—
2	—	OG / VT	3022	Steering Wheel Air Bag Stage 2 Low Control	I	—

F112D Seat Belt Retractor Pretensioner - Driver



4241364

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33345778
Service Connector: 19355490
Description: 2-Way F ABX-5 Series(PU with YE Cover)

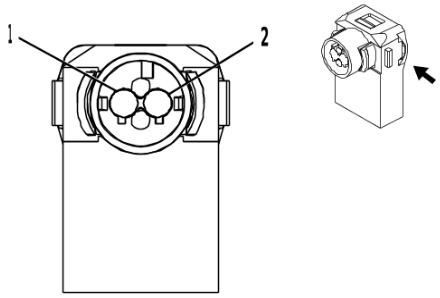
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

F112D Seat Belt Retractor Pretensioner - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG / WH	3477	Driver Seat Belt Retractor Pretensioner High Control	I	—
2	0.5	GY / OG	3478	Driver Seat Belt Retractor Pretensioner Low Control	I	—

F112P Seat Belt Retractor Pretensioner - Passenger



4241364

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33345778
Service Connector: 19355490
Description: 2-Way F ABX-5 Series(PU with YE Cover)

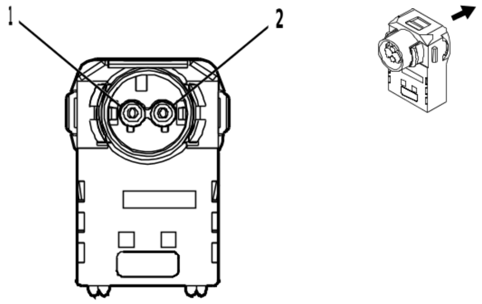
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

F112P Seat Belt Retractor Pretensioner - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG / GN	3475	Passenger Seat Belt Retractor Pretensioner High Control	I	—
2	0.5	WH / OG	3476	Passenger Seat Belt Retractor Pretensioner Low Control	I	—

F113D Seat Belt Anchor Pretensioner - Driver



4231869

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33345777
Service Connector: 19355489
Description: 2-Way F ABX-5 Series(PK with YE Cover)

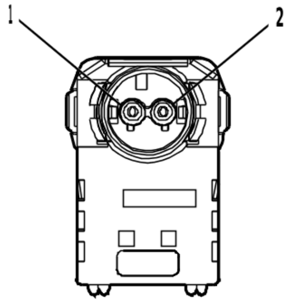
Terminal Part Information

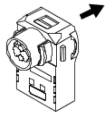
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

F113D Seat Belt Anchor Pretensioner - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG / YE	3481	Driver Seat Belt Anchor Pretensioner High Control	I	—
2	0.5	YE / OG	3482	Driver Seat Belt Anchor Pretensioner Low Control	I	—

F113P Seat Belt Anchor Pretensioner - Passenger





4231869

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33345777
Service Connector: 19355489
Description: 2-Way F ABX-5 Series(PK with YE Cover)

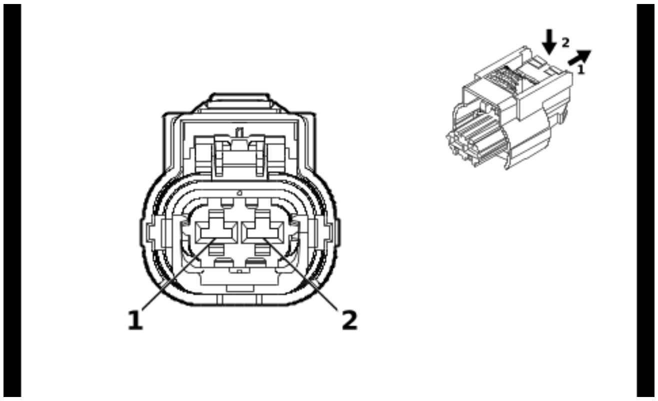
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

F113P Seat Belt Anchor Pretensioner - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	OG / BN	3479	Passenger Seat Belt Anchor Pretensioner High Control	I	—
2	0.5	GY / OG	3480	Passenger Seat Belt Anchor Pretensioner Low Control	I	—

G13 Generator X1



4992524

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 35182447
Service Connector: 84941154
Description: 2-Way F 2.8 MCP Series, Sealed(BK)

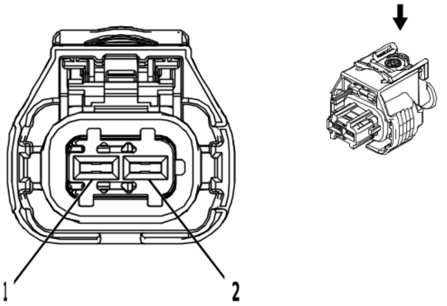
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required

G13 Generator X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN	25	Charge Indicator Control	I	L8T
	0.5	BN	25	Charge Indicator Control	I	VYU
	0.75	BN	25	Charge Indicator Control	II	- VYU
2	0.5	GY	23	Generator Field Duty Cycle Signal	II	L5P
	0.5	GY	23	Generator Field Duty Cycle Signal	I	L8T

G13 Generator X2 (VYU)



2577394

Connector Part Information

Harness Type: Accessory Wiring Harness
OEM Connector: 13930085
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed(BK)

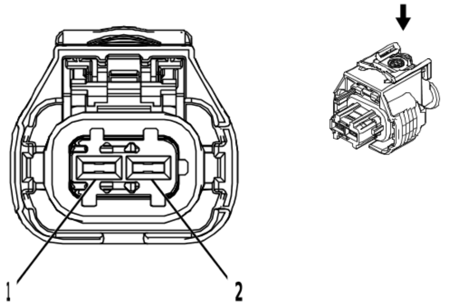
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

G13 Generator X2 (VYU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	RD / YE	2	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—

G13E Generator - Auxiliary X1 (VYU)



2577394

Connector Part Information

Harness Type: Accessory Wiring Harness
OEM Connector: 13930085
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed(BK)

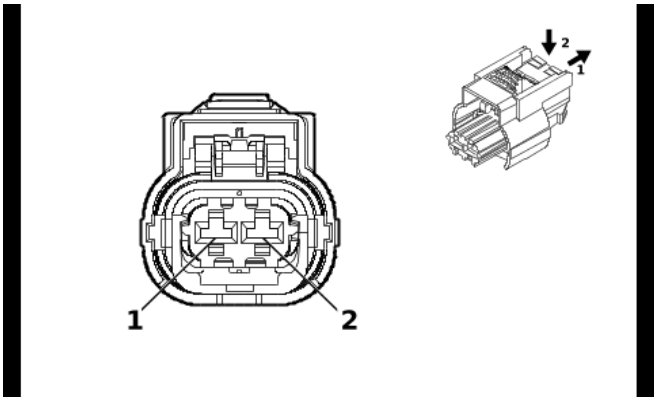
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

G13E Generator - Auxiliary X1 (VYU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	—	I	—
2	—	—	—	—	I	—

G13E Generator - Auxiliary X2 (KHF)



4992524

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 35182447
Service Connector: 84941154
Description: 2-Way F 2.8 MCP Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required

G13E Generator - Auxiliary X2 (KHF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN	25	Charge Indicator Control	II	L5P
	0.75	BN	25	Charge Indicator Control	I	L8T
2	0.5	GY	23	Generator Field Duty Cycle Signal	II	L5P
	0.5	GY	23	Generator Field Duty Cycle Signal	I	L8T

G18 High Pressure Fuel Pump

—

Connector Part Information

Harness Type: Fuel Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

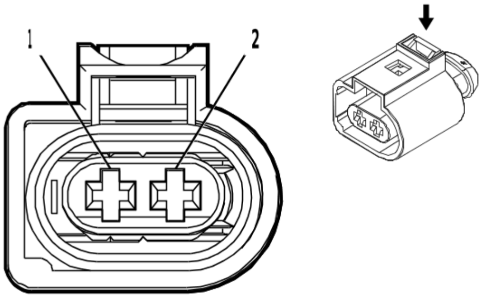
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

G18 High Pressure Fuel Pump

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	YE	7301	High Pressure Fuel Pump High Control	I	—
2	—	VT / BK	7300	High Pressure Fuel Pump Low Control	I	—

G24 Windshield Washer Pump



2474738

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 10863916
Service Connector: 85005016
Description: 2-Way F 2.8 MDK5 Series, Sealed(BK)

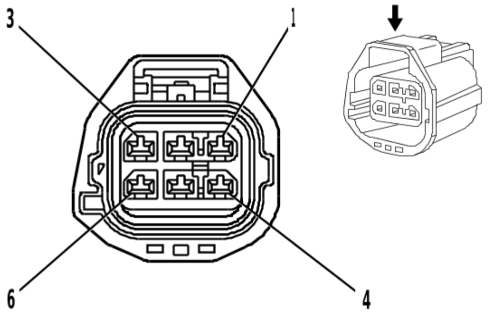
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required

G24 Windshield Washer Pump

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY / VT	228	Windshield Washer Pump Control	I	—
2	0.75	BK	150	Ground	I	—

K4 Assist Step Control Module X1 (BRS)



1420587

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33334914
Service Connector: 19368306
Description: 6-Way F 2.8 Series, Sealed(GY)

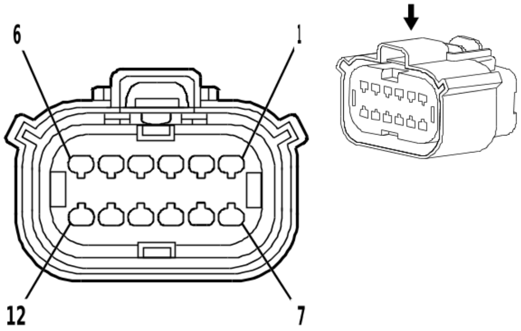
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

K4 Assist Step Control Module X1 (BRS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	GN	7469	Right Left Running Board Step Motor Control Retract	I	—
2	2.5	BK / WH	1651	Signal Ground	I	—
3	2	WH / BN	7471	Left Running Board Step Motor Control Extend	I	—
4	2	BU	7470	Right Running Board Step Motor Control Extend	I	—
5	2.5	RD / YE	1142	Battery Positive Voltage	I	—
6	2	GY	7472	Left Running Board Step Motor Control Retract	I	—

K4 Assist Step Control Module X2 (BRS)



1825165

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 15525970
Service Connector: 19352907
Description: 12-Way F 1.5 MX Series, Sealed(BK)

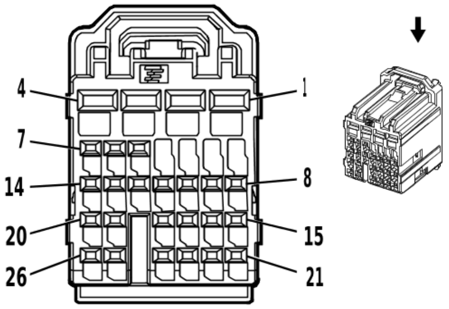
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19368973	J-35616-2A (GY)	J-38125-217

K4 Assist Step Control Module X2 (BRS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT / RD	7468	Left Running Board Step Motor Hall Sensor 5V Reference	I	—
2	0.5	GN / RD	7464	Right Running Board Step Motor Hall Sensor 5V Reference	I	—
3	0.5	YE	7467	Left Running Board Step Motor Hall Sensor Signal	I	—
4	0.5	VT	7465	Right Running Board Step Motor Hall Sensor Signal	I	—
5	0.5	YE / BN	7466	Left Running Board Step Motor Hall Sensor Low Reference	I	—
6	0.5	YE / BK	7463	Right Running Board Step Motor Hall Sensor Low Reference	I	—
7	—	—	—	Not Occupied	—	—
8	0.5	GN	5060	Low Speed GMLAN Serial Data	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	BN / WH	7462	Running Board Steps Disable Signal	I	—
11 - 12	—	—	—	Not Occupied	—	—

K9 Body Control Module X1



2537268

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 13824335
Service Connector: 13576031
Description: 26-Way F 0.64, 2.8 Series(NA)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13582298	J-35616-64B (L-BU)	J-38125-215A
II	19354201	J-35616-35 (VT)	J-38125-553

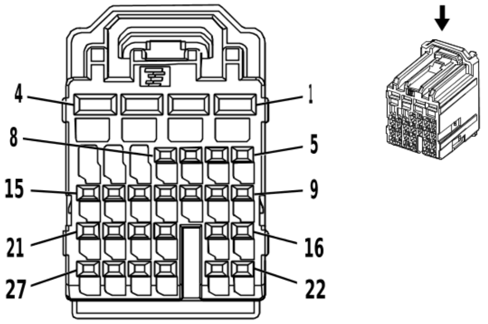
K9 Body Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BK	1850	Ground	II	—
2	1	RD / BU	2540	Battery Positive Voltage	II	—
3	0.5	RD / GY	2140	Battery Positive Voltage	II	—
4	0.75	RD / BN	2240	Battery Positive Voltage	II	—
5	0.5	WH	6816	Indicator Dimming Control	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.35	BN / BK	5720	Ignition Mode Switch Accessory LED Signal	I	—
9	0.35	WH / BN	7555	Headlamp Switch Signal	I	—
10	—	—	—	Not Occupied	—	—
11	0.35	GN / BN	306	Headlamp Switch Off Signal	I	—
12	—	—	—	Not Occupied	—	—
13	0.35	YE	7556	Headlamp Switch Reference	I	—
14	0.35	GY / GN	328	Interior Lamp Defeat Switch Signal	I	—
15	—	—	—	Not Occupied	—	—
16	0.35	WH / VT	103	Headlamp Switch On Signal	I	—
17	—	—	—	Not Occupied	—	—
18	0.35	BU / VT	5904	Steering Column Lock Status Signal	I	—
19	0.35	BK / BN	5360	Brake Apply Sensor Low Reference	I	—
20	0.35	BU / BK	5719	Ignition Mode Switch Start LED Signal	I	—
21	0.35	GY / WH	728	Security Indicator Control	I	—
22	0.35	GN / GY	13	Headlamp Switch Park Lamp Signal	I	—

K9 Body Control Module X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
23	0.35	GY	157	Interior Lamp Control	I	—
24	0.35	WH	2501	High Speed GMLAN Serial Data [-] 1	I	—
25	0.35	BU	2500	High Speed GMLAN Serial Data [+] 1	I	—
26	0.35	BU / WH	3275	Remote Control Door Lock Receiver Receive Signal	I	—

K9 Body Control Module X2



2537269

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 13824336
Service Connector: 13576032
Description: 27-Way F 0.64, 2.8 Series(BU)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13582298	J-35616-64B (L-BU)	J-38125-215A
II	19354201	J-35616-35 (VT)	J-38125-553
III	Not required	No Tool Required	No Tool Required

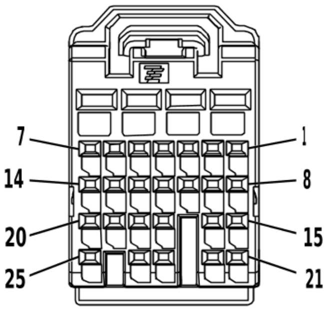
K9 Body Control Module X2

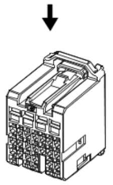
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD / WH	2740	Battery Positive Voltage	II	—
2	2.5	BK	1850	Ground	II	—
3	0.5	RD / BN	2940	Battery Positive Voltage	II	—
4	2.5	WH / RD	1444	12V Reference	II	—
5	0.35	VT / GN	7558	Front Footwell Accent Lighting Control	I	—
6	—	—	—	Not Occupied	—	—
7	0.35	BU / YE	5361	Brake Apply Sensor Signal	I	—
8	—	—	—	Not Occupied	—	—
9	—	BN / GN	1884	Cruise Control Set/Coast/Resume/Accelerate Switch Signal	III	—
10	0.35	WH / BU	278	Ambient Light Sensor Signal	I	—
11	0.35	YE / BU	7295	Left Minor Endgate Ajar Signal	I	—
12	0.35	WH / BN	7296	Right Minor Endgate Ajar Signal	I	—
13	0.35	WH	5359	Brake Apply Sensor Control	I	—
14	0.35	BU / VT	1788	Traction Control Switch Signal 1	I	—
15	0.35	GY / WH	4630	AC Power Outlet Switch Signal	I	—
16	0.35	GY / GN	5737	Distance Sensing Cruise Control Gap Up/Down Switch Signal	I	—
17	0.35	BU / GN	5723	Ignition Mode Switch Mode Voltage	I	—
18	0.35	GY	158	Cargo Lamp Switch Signal	I	—
19	0.35	WH / GY	2935	Task Lamp Switch Signal	I	—

K9 Body Control Module X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
20	0.5	WH / BU	3691	Trailer Brake Apply Signal	I	—
21	0.5	GN / GY	6135	Body Control Module LIN Bus 4	I	—
22	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
23 - 24	—	—	—	Not Occupied	—	—
25	0.35	GY / WH	3272	Remote Control Door Lock Receiver Control	I	—
26	0.35	GN / WH	111	Hazard Warning Switch Signal	I	—
27	0.35	YE / GN	3274	Remote Control Door Lock Receiver Transmit Signal	I	—

K9 Body Control Module X3





2537274

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 13824337
Service Connector: 13576037
Description: 25-Way F 0.64, 2.8 Series(GN)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13582298	J-35616-64B (L-BU)	J-38125-215A

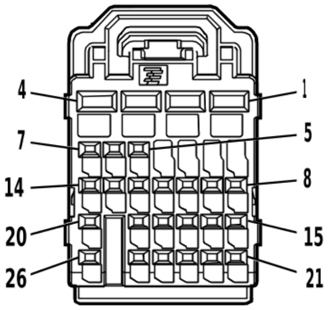
K9 Body Control Module X3

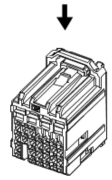
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35 0.5	GN / GY GN / GY	3277 3277	Vehicle Anti-Theft System Immobilizer Low Reference Vehicle Anti-Theft System Immobilizer Low Reference	I I	BTM - BTM
2	0.35 0.5	GN / VT GN / VT	7533 7533	Immobilizer LIN Bus 1 Immobilizer LIN Bus 1	I I	BTM - BTM
3	0.35 0.5	GY / BK GY / BK	3276 3276	Immobilizer Control Module Control Immobilizer Control Module Control	I I	BTM - BTM
4	0.35	WH / RD	1444	12V Reference	I	—
5	0.35	VT / YE	4	Accessory Ignition Voltage	I	—
6	0.35	VT / BK	3	Run/Crank Ignition 1 Voltage	I	—
7 - 8	—	—	—	Not Occupied	—	—
9	0.35	BN / GN	1884	Cruise Control Set/Coast/Resume/Accelerate Switch Signal	I	—
10	0.5	BK / GY	6009	Windshield Wiper Switch Low Reference	I	—
11	0.5	WH	524	High Beam Select Switch High Beam Signal	I	—
12	0.5	WH / GN	663	Hazard Switch Left Turn Signal	I	—
13	0.5	YE / BU	1714	Windshield Wiper Switch Low Signal	I	—
14	0.5	WH / GY	3849	Automatic High Beam On/Off Switch Signal	I	—
15	0.35	WH / VT	1020	Off/Run/Crank Ignition Voltage	I	—
16	0.35	GY / GN	5737	Distance Sensing Cruise Control Gap Up/Down Switch Signal	I	—
17	0.5	YE / BN	307	Headlamp Switch Flash Signal	I	—
18	0.35	GN / WH	3287	Horn Switch Signal	I	—

K9 Body Control Module X3 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
19	0.35	GN / WH	4115	Body Control Module LIN Bus 5	I	—
20	0.5	GY	1715	Windshield Wiper Switch High Signal	I	—
21	0.5	VT / YE	5526	Tap Up/Tap Down Switch Signal	I	—
22	0.35	WH / BK	1073	Ignition Key Resistor Signal	I	—
23	0.35	GN	4512	Wireless Charging System Charge Indicator Control	I	—
24	0.5	VT / BU	664	Hazard Switch Right Turn Signal	I	—
25	0.35	WH / BK	94	Windshield Washer Switch Signal	I	—

K9 Body Control Module X4





2537270

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 13826914
Service Connector: 13576033
Description: 26-Way F 0.64, 2.8 Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13582298	J-35616-64B (L-BU)	J-38125-215A
II	19354201	J-35616-35 (VT)	J-38125-553

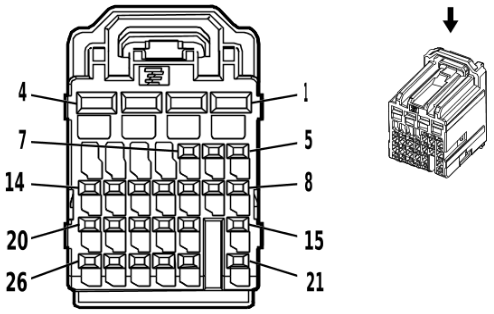
K9 Body Control Module X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE	712	Left Headlamp Low Beam Control	II	—
2	1	YE	312	Right Headlamp Low Beam Control	II	—
3	0.35	GN / VT	1315	Right Front Turn Signal Lamp Control	II	DBG/ DWI/ DZC
4	1	BN / GN	19	Right Rear Stop/Turn Signal Lamp Control	II	—
5 - 6	—	—	—	Not Occupied	—	—
7	0.35	GY / BU	7538	Left Front DRL Control	I	—
8	0.35	VT / GY	1630	Steering Column Key Cylinder Lock Solenoid Actuator Control	I	—
9	0.35	WH / VT	968	Auxiliary 4 Control	I	—
10	—	—	—	Not Occupied	—	—
11	0.35	VT / WH	5065	Stop Lamp Relay Coil Control	I	—
12	0.35	GY / VT	755	Retained Accessory Power Relay Coil Control	I	—
13	0.35	GN / YE	6846	Rear License Plate Lamp Control	I	—
14	0.35	BN / GY	2268	Windshield Washer Relay Control	I	—
15	0.35	GN / VT	5199	Run/Crank Relay Coil Control	I	—
16	0.35	GY	91	Windshield Wiper Motor Relay Coil Control	I	—
17	0.35	BN / GN	196	Windshield Wiper Motor Park Switch Signal	I	—
18	0.35 0.35	GN / BU WH / YE	761 5075	Blower Speed Feedback Signal Current Sensor Signal	I I	L5P L8T
19	0.35	BU / YE	7176	All Windows Open Switch Signal	I	—
20	0.75	RD / YE	2340	Battery Positive Voltage	I	—

K9 Body Control Module X4 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
21	0.35	BU / VT	5076	Current Sensor Voltage Reference	I	—
22	0.35	VT / YE	5985	Accessory Wake-Up Serial Data	I	—
23	0.35	WH / BU	5986	Serial Data Communication Enable	I	—
24	0.35	BN / GN	4064	Hood Status B Signal	I	—
25	0.35	YE / BU	4086	Ignition Mode Switch Challenge Active Signal	I	—
26	0.75	BK / WH	2351	Signal Ground	I	—

K9 Body Control Module X5



2537271

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 13826916
Service Connector: 13576034
Description: 26-Way F 0.64, 2.8 Series(BN)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13582298	J-35616-64B (L-BU)	J-38125-215A
II	19354201	J-35616-35 (VT)	J-38125-553

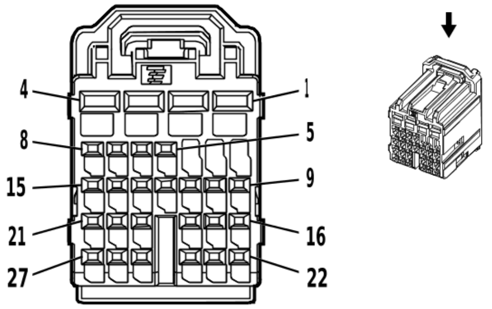
K9 Body Control Module X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	YE / BU	18	Left Rear Stop/Turn Signal Lamp Control	II	—
2	0.35	BU / WH	1314	Left Front Turn Signal Lamp Control	II	—
3	0.5	RD / GN	5140	Battery Positive Voltage	II	—
4	0.5	RD / WH	3440	Battery Positive Voltage	II	—
5	—	—	—	Not Occupied	—	—
6	0.35	BK / VT	5077	Current Sensor Low Reference	I	—
7	0.35	BU / BN	7539	Right Front DRL Control	I	—
8	0.5	BU / WH	5186	Left Trailer Turn Signal Lamp Control	I	—
9	0.35	BU / VT	7729	Major Endgate Low Relay Control	I	—
10	0.5	BN / WH	1317	Fog Lamp Relay Control	I	—
11	0.35	WH / GN	7728	Major Endgate High Relay Control	I	—
12	0.35	WH / BU	6311	Cruise/ETC/TCC Brake Signal	I	—
13	0.35	YE	6812	Out of Park Signal	I	—
14	0.35	VT / BN	300	Run Ignition 3 Voltage	I	—
15	0.35	BU / GY	4672	Dome Lamp Off Indicator Control	I	—
16	—	—	—	Not Occupied	—	—
17	0.5	YE / GY	5187	Right Trailer Turn Signal Lamp Control	I	—
18	0.35	BN / VT	1969	Headlamp High Beam Relay Control	I	—
19	0.35	BN / WH	28	Horn Relay Control	I	—
20	0.35	YE	7755	AC Power Outlet Status Indicator Control	I	—
21	0.5	YE / BN	2229	Left Headlamp Relay Control	I	—

K9 Body Control Module X5 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
22	0.35	BU	45	Park Lamp Relay Control	I	—
23	0.5	GN / YE	2081	Exhaust Brake Switch Signal	I	—
24	0.35	WH / VT	860	Windshield Wiper Switch High Signal	I	—
25	0.35	BN	7754	AC Power Outlet Enable Signal	I	—
26	0.35	BU / BN	38	Backup Lamp Relay Control	I	—

K9 Body Control Module X6



2537272

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 13826917
Service Connector: 13576035
Description: 27-Way F 0.64, 2.8 Series(PK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13582298	J-35616-64B (L-BU)	J-38125-215A
II	19354201	J-35616-35 (VT)	J-38125-553

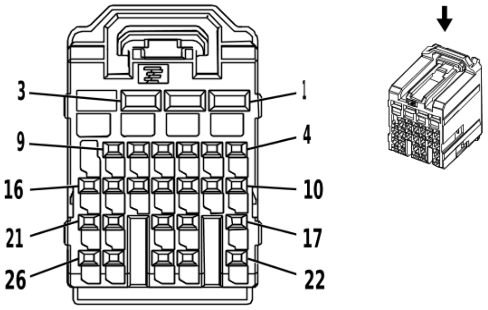
K9 Body Control Module X6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY	5911	Door Lock Actuator Lock Control 2	II	—
2	0.75	GY	295	Door Lock Actuator Lock Control	II	—
3	2.5	BK	1150	Ground	II	—
4	0.75	BN / YE	294	Door Lock Actuator Unlock Control	II	—
5	0.35	BN	7291	Major Endgate Release Switch Signal Interior	I	—
6	0.35	BU / VT	1124	Door Lock Key Switch Unlock Signal	I	—
7	0.35	WH / GY	7297	Minor Endgate High Relay Control	I	—
8	—	—	—	Not Occupied	—	—
9	0.35	GN / BU	6133	Body Control Module LIN Bus 2	I	—
10	0.35	GN / YE	6134	Body Control Module LIN Bus 3	I	—
11	—	—	—	Not Occupied	—	—
12	0.35	YE / BK	5356	Left Tail Lamp Outage Detection Signal	I	—
13	0.35	GN / WH	3438	Exhaust Brake Switch Indicator Control	I	—
14	0.35	GY	7292	Major Endgate Release Switch Signal Exterior	I	—
15	0.35	YE	7294	Minor Endgate Release Switch Discrete Signal Exterior	I	—
16	0.5	GN / BN	6132	Body Control Module LIN Bus 1	I	—
17 - 21	—	—	—	Not Occupied	—	—
22	0.35	VT / YE	5357	Right Tail Lamp Outage Detection Signal	I	—
23	—	—	—	Not Occupied	—	—
24	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	I	—

K9 Body Control Module X6 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
25	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	I	—
26	0.35	BN / WH	1429	Standing Lamp Relay Control	I	—
27	0.35	BN / WH	781	Driver Door Lock Switch Unlock Signal	I	—

K9 Body Control Module X7



2537273

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 13826915
Service Connector: 13576036
Description: 26-Way F 0.64, 2.8 Series(GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13582298	J-35616-64B (L-BU)	J-38125-215A
II	19354201	J-35616-35 (VT)	J-38125-553

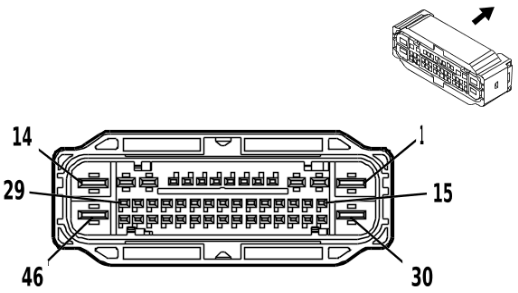
K9 Body Control Module X7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.5	WH / BN	6815	Inadvertent Load Control	II	—
4	0.5	GY / BU	7762	Cargo Lamp Control	I	—
5	0.35	BU	2082	Puddle Lamp Control	I	—
6	0.35	YE / WH	816	Brake Transmission Shift Interlock Solenoid Actuator Control	I	—
7	0.35	GY / BU	7298	Minor Endgate Low Relay Control	I	—
8	0.35	GY / GN	5996	Driver Outside Rearview Mirror Courtesy Lamp Control	I	—
9	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
10	—	—	—	Not Occupied	—	—
11	0.35	BN / YE	780	Driver Door Lock Switch Lock Signal	I	—
12	0.35	BN	4511	Wireless Charging System Fault Indicator Control	I	—
13	0.35	GN / WH	1932	Shift Select Switch Park Signal	I	—
14	0.35 0.35	GY WH / YE	746 7545	Right Front Door Ajar Switch Signal Right Front Turn Signal Lamp Feedback Signal	I I	A6R AXG
15	0.35	BU / GY	553	Shift Select Switch Performance Signal	I	—
16	0.5	WH / BU	3691	Trailer Brake Apply Signal	I	—
17	0.35	BU	2082	Puddle Lamp Control	I	—
18	—	—	—	Not Occupied	—	—
19	0.35	GY	156	Courtesy Lamp Switch Signal	I	—

K9 Body Control Module X7 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
20	—	—	—	Not Occupied	—	—
21	0.35	YE / VT	244	Passenger Door Lock Switch Lock Control	I	—
22	0.35	WH / YE	7557	Interior Door Handle Accent Lighting Control	I	—
23	—	—	—	Not Occupied	—	—
24	0.35	BN / VT	245	Passenger Door Lock Switch Unlock Control	I	—
25	0.35 0.35	PK VT / BK	745 6568	Left Front Door Ajar Switch Signal Front Turn Signal Lamp Feedback Signal	I I	A6R AXG
26	—	—	—	Not Occupied	—	—

K17 Electronic Brake Control Module



4162046

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35337284
Service Connector: 19333026
Description: 46-Way F 1.2 OCS, 2.8, 4.8 CTS Series, Sealed(GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575368	J-35616-35 (VT)	J-38125-36
II	19370818	J-35616-12 (BU)	J-38125-215A
III	84634921	J-35616-42 (RD)	J-38125-212

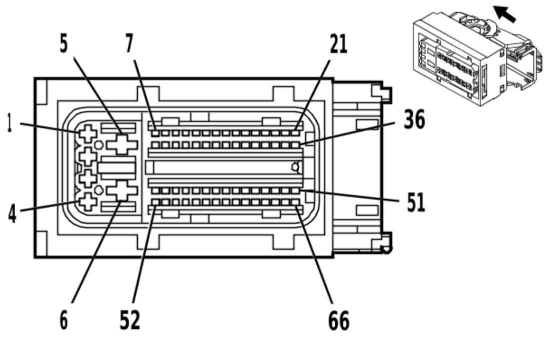
K17 Electronic Brake Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	4	RD / YE	442	Battery Positive Voltage	III	—
2	2.5	WH	2001	Left Park Brake Motor Apply Control	I	—
3	2.5	GY / BK	4369	Left Park Brake Motor Low Reference	I	—
4	0.5	GY / WH	7064	Left Front Wheel Speed Sensor Control	II	—
5	0.5	GY	830	Left Front Wheel Speed Sensor Signal	II	—
6	—	—	—	Not Occupied	—	—
7	0.5	BU / YE	6105	High Speed GMLAN Serial Data [+] 2	II	—
8	0.5	WH	6106	High Speed GMLAN Serial Data [-] 2	II	—
9	0.5	WH / BU	5986	Serial Data Communication Enable	II	—
10	0.5	GY / BN	7065	Right Front Wheel Speed Sensor Control	II	—
11	0.5	YE	872	Right Front Wheel Speed Sensor Signal	II	—
12	2.5	GN / VT	1988	Right Park Brake Motor Apply Control	I	—
13	2.5	GY	4368	Right Park Brake Motor Low Reference	I	—
14	4	BK	150	Ground	III	—
15	0.5	GY / BK	7127	Left Rear Wheel Speed Sensor Control	II	—
16	0.5	BU	884	Left Rear Wheel Speed Sensor Signal	II	—
17 - 20	—	—	—	Not Occupied	—	—
21	0.35	BN	2417	Park Brake Switch Monitor Signal 2	II	—
22	0.35	GY / RD	2414	Park Brake Switch Voltage Reference 1	II	—
23	0.35	YE / RD	2415	Park Brake Switch Voltage Reference 2	II	—

K17 Electronic Brake Control Module (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
24	0.35	BU / VT	1134	Park Brake Switch Signal	II	—
25	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	—
26	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	—
27	0.5	GN / GY	333	Brake Fluid Level Signal	II	—
28	0.5	GY / YE	7128	Right Rear Wheel Speed Sensor Control	II	—
29	0.5	VT	882	Right Rear Wheel Speed Sensor Signal	II	—
30	4	RD / VT	1640	Battery Positive Voltage	III	—
31	0.35	BU / BK	2416	Park Brake Switch Monitor Signal 1	II	—
32	0.35	YE	2418	Park Brake Switch Test Signal	II	—
33 - 35	—	—	—	Not Occupied	—	—
36	0.35	GN / GY	817	Vehicle Speed Signal	II	—
37 - 38	—	—	—	Not Occupied	—	—
39	0.5	BN / BU	1602	Front Brake Pad Wear Sensor Signal	II	—
40	0.5	GN / YE	1616	Rear Brake Pad Wear Sensor Signal	II	—
41	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	—
42	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	—
43	0.35	GN / BN	2087	Multi-axis Acceleration Sensor Supply Voltage	II	—
44 - 45	—	—	—	Not Occupied	—	—
46	4	BK	2250	Ground	III	—

K20 Engine Control Module X1 (L5P)



2498868

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 35059716
Service Connector: 19370822
Description: 66-Way F 0.64 MTS-B, 2.8 ATS, 6.3 Ducon Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13580829	J-35616-4A (PU)	J-38125-36
II	13584448	J-35616-64B (L-BU)	J-38125-215A
III	19369848	J-35616-43 (RD)	J-38125-215A
IV	Not required	No Tool Required	No Tool Required

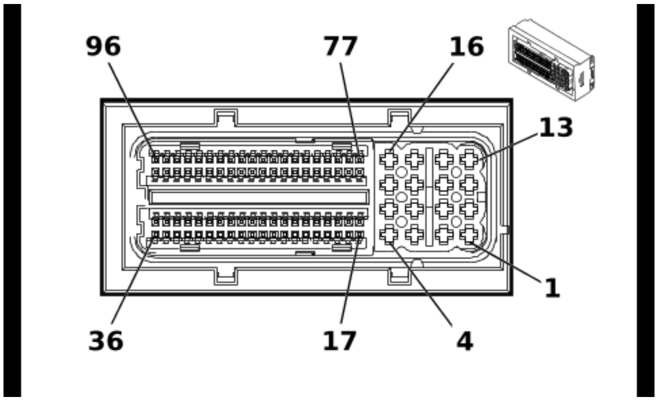
K20 Engine Control Module X1 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT / BU	5290	Powertrain Main Relay Fused Supply Voltage 1	I	—
2	0.5	VT / BU	5290	Powertrain Main Relay Fused Supply Voltage 1	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	RD / BN	440	Battery Positive Voltage	I	—
5	2.5	VT / BU	5290	Powertrain Main Relay Fused Supply Voltage 1	III	—
6	2.5	BK / WH	451	Signal Ground	III	—
7	0.5	VT / YE	5985	Accessory Wake-Up Serial Data	II	—
8 - 9	—	—	—	Not Occupied	—	—
10	0.5	GN / WH	492	Mass Air Flow Sensor Signal	II	—
11	0.5	BU / GY	636	Ambient Air Temperature Sensor Signal	II	—
12	—	—	—	Not Occupied	—	—
13	0.5	WH / RD	1164	Accelerator Pedal Position 5V Reference 1	II	—
14	0.5	BN / RD	1274	Accelerator Pedal Position 5V Reference 2	II	—
15	0.5	GN / WH	1162	Accelerator Pedal Position Signal 2	II	—
16	0.5	BK / VT	1272	Accelerator Pedal Position Low Reference 2	II	—
17 - 20	—	—	—	Not Occupied	—	—
21	— 0.5	WH / BN YE	4108 2928	Driver Mode Switch Signal Fuel Metering Solenoid Valve High Control	IV II	— —
22	0.5	VT / GN	439	Run/Crank Ignition 1 Voltage	II	—

K20 Engine Control Module X1 (L5P) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
23	—	—	—	Not Occupied	—	—
24	0.5	WH / BU	6311	Cruise/ETC/TCC Brake Signal	II	—
25	0.5	BN / GY	4008	Humidity Sensor Signal	II	—
26	0.5	BK / BU	61	Ambient Air Temperature Sensor Low Reference	II	—
27	0.5	BK / BU	1271	Accelerator Pedal Position Low Reference 1	II	—
28	0.5	YE / WH	1161	Accelerator Pedal Position Signal 1	II	—
29 - 32	—	—	—	Not Occupied	—	—
33	0.5	BN / WH	419	Check Engine Indicator Control	II	—
34	0.5	GN / BN	507	Wait To Start Indicator Control	II	—
35	0.5	WH / GY	459	A/C Compressor Clutch Relay Control	II	—
36	0.5	BN / BK	2929	Fuel Metering Solenoid Valve Low Control	II	—
37 - 38	—	—	—	Not Occupied	—	—
39	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	II	—
40	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	—
41 - 42	—	—	—	Not Occupied	—	—
43	0.5	BK / YE	5382	Brake Position Sensor Low Reference	II	—
44	0.5	WH / RD	5381	Brake Position Sensor 5V Reference	II	—
45	0.5	WH / BU	6289	Intake Air Temperature Sensor Signal	II	—
46	0.5	BN / RD	2700	A/C Pressure Sensor 5V Reference	II	—
47	0.5	GN	380	A/C Refrigerant Pressure Sensor Signal	II	—
48	0.5	BK / BN	5514	A/C Refrigerant Pressure Sensor Low Reference	II	—
49	—	—	—	Not Occupied	—	—
50	0.5	WH / BK	2366	Cooling Fan Speed Control Signal	II	—
51	0.5	YE	5991	Powertrain Relay Coil Control	II	—
52 - 53	—	—	—	Not Occupied	—	—
54	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	II	—
55	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	—
56 - 57	—	—	—	Not Occupied	—	—
58	0.5	GN / VT	4621	Engine Control Module LIN Bus 1	II	—
59	0.5	WH / GN	5380	Brake Position Sensor Signal	II	—
60	0.5	BK / VT	2760	Intake Air Temperature Sensor Low Reference	II	—
61	0.5	GY	4109	Driver Mode Switch 5V Reference	II	—
62	0.5	WH / BN	2203	Enhanced Driver Mode 2 Switch Signal	II	—
63	0.5	BK / VT	3109	Economy Mode Switch Low Reference	II	—
64	—	—	—	Not Occupied	—	—
65	0.5	YE / BK	625	Starter Enable Relay Control	II	—
66	0.5	GN / GY	465	Fuel Pump Primary Relay Control	II	—

K20 Engine Control Module X2 (L5P)



2499318

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 12698087
Service Connector: 19370825
Description: 96-Way F 0.64 MTS-B, 2.8 ATS Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13580829	J-35616-4A (PU)	J-38125-36
II	13584448	J-35616-64B (L-BU)	J-38125-215A

K20 Engine Control Module X2 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT / GN	4806	Direct Fuel Injector High Voltage Control Cylinder 6	I	L5P
2	0.75	YE / GY	4807	Direct Fuel Injector High Voltage Control Cylinder 7	I	L5P
3	0.75	GY / BU	4804	Direct Fuel Injector High Voltage Control Cylinder 4	I	L5P
4	0.75	BN	4801	Direct Fuel Injector High Voltage Control Cylinder 1	I	L5P
5	0.75	VT / GY	4906	Direct Fuel Injector High Voltage Supply Cylinder 6	I	L5P
6	0.75	WH / YE	4907	Direct Fuel Injector High Voltage Supply Cylinder 7	I	L5P
7	0.75	BU / WH	4904	Direct Fuel Injector High Voltage Supply Cylinder 4	I	L5P
8	0.75	BN / WH	4901	Direct Fuel Injector High Voltage Supply Cylinder 1	I	L5P
9	0.75	GN / GY	4903	Direct Fuel Injector High Voltage Supply Cylinder 3	I	L5P
10	0.75	GY / WH	4908	Direct Fuel Injector High Voltage Supply Cylinder 8	I	L5P
11	0.75	GN / WH	4905	Direct Fuel Injector High Voltage Supply Cylinder 5	I	L5P
12	0.75	BU / GY	4902	Direct Fuel Injector High Voltage Supply Cylinder 2	I	L5P
13	0.75	GN	4803	Direct Fuel Injector High Voltage Control Cylinder 3	I	L5P

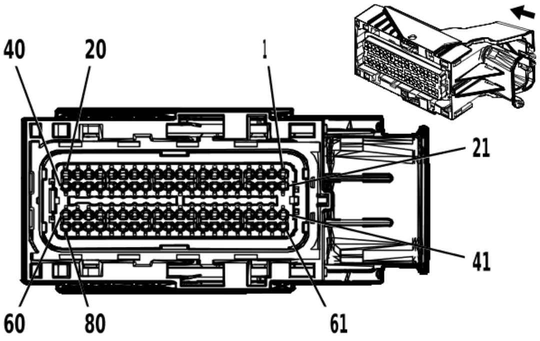
K20 Engine Control Module X2 (L5P) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
14	0.75	GY	4808	Direct Fuel Injector High Voltage Control Cylinder 8	I	L5P
15	0.75	WH / GN	4805	Direct Fuel Injector High Voltage Control Cylinder 5	I	L5P
16	0.75	BU	4802	Direct Fuel Injector High Voltage Control Cylinder 2	I	L5P
17	0.5	BK / VT	2755	Oil Pressure Sensor Low Reference	II	L5P
18	0.5	YE / BN	331	Oil Pressure Sensor Signal	II	L5P
19	0.5	WH / RD	2705	Oil Pressure Sensor 5V Reference	II	L5P
20	0.5	BU / RD	5047	Exhaust Gas Recirculation Valve Position Sensor 5V Reference 1	II	L5P
21	0.5	BN / WH	5763	Exhaust Gas Recirculation Position Signal	II	L5P
22	0.5	BK / BN	2753	Exhaust Gas Recirculation Sensor Low Reference	II	L5P
23	—	—	—	Not Occupied	—	—
24	0.5	BN / YE	2161	Fuel Rail Pressure Sensor 2 Signal	II	L5P
25	—	—	—	Not Occupied	—	—
26	0.5	WH / BU	7329	Pre-Throttle Air Temperature Signal	II	L5P
27 - 29	—	—	—	Not Occupied	—	—
30	0.5	BU	410	Engine Coolant Temperature Sensor Signal	II	L5P
31	0.5	BN	25	Charge Indicator Control	II	L5P
32 - 36	—	—	—	Not Occupied	—	—
37	0.5	BK / GY	5296	Exhaust Camshaft Position Sensor Low Reference 1	II	L5P
38	0.5	VT / BK	5273	Exhaust Camshaft Position Sensor 1	II	L5P
39	0.5	GY / YE	5297	Exhaust Camshaft Position Sensor 1 Voltage Reference	II	L5P
40	0.5	VT / RD	3652	EGR Cooler Bypass Valve Position Sensor 5V Reference	II	L5P
41	0.5	GN / GY	3654	EGR Cooler Bypass Valve Position Sensor Signal	II	L5P
42	0.5	BK / BU	3653	EGR Cooler Bypass Valve Position Sensor Low Reference	II	L5P
43	0.5	BK / BN	2752	Throttle Position Sensor Low Reference	II	L5P
44	0.5	BU / WH	3630	Throttle Position Sensor SENT 1 Signal	II	L5P
45	0.5	BN / RD	2701	Throttle Position Sensor 5V Reference	II	L5P
46 - 49	—	—	—	Not Occupied	—	—
50	0.5	BK / BN	2761	Coolant Temperature Sensor Low Reference	II	L5P
51	0.5	GY	23	Generator Field Duty Cycle Signal	II	L5P
52 - 56	—	—	—	Not Occupied	—	—
57	0.5	BK / GN	2919	Fuel Rail Pressure Sensor Low Reference	II	L5P
58	0.5	BU / WH	2918	Fuel Rail Pressure Sensor Signal	II	L5P
59	0.5	BN / RD	2917	Fuel Rail Pressure Sensor 5V Reference	II	L5P
60	0.5	GY / RD	2704	Manifold Absolute Pressure Sensor 5V Reference	II	L5P
61	0.5	GN / WH	432	Manifold Absolute Pressure Sensor Signal	II	L5P
62	0.5	BK / GN	469	Manifold Absolute Pressure Sensor Low Reference	II	L5P
63 - 68	—	—	—	Not Occupied	—	—

K20 Engine Control Module X2 (L5P) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
69	0.5	BN / BU	2926	Exhaust Aftertreatment Fuel Injector High Control	II	L5P
70	—	—	—	Not Occupied	—	—
71	0.5	VT / BU	6091	Crankshaft Position Sensor Replicated Signal	II	L5P
72	0.5	VT / BN	2927	Exhaust Aftertreatment Fuel Injector Low Control	II	L5P
73	—	—	—	Not Occupied	—	—
74	0.5	YE	581	Throttle Actuator Open Control	II	L5P
75	0.5	BN / WH	582	Throttle Actuator Close Control	II	L5P
76	0.75	BK / YE	2834	Fuel Rail Pressure Solenoid Valve Low Reference	II	L5P
77 - 83	—	—	—	Not Occupied	—	—
84	0.5	BK / VT	6272	Crankshaft Position Sensor Low Reference	II	L5P
85	0.5	GN	6271	Crankshaft Position Sensor Signal	II	L5P
86	0.5	VT / BU	6270	Crankshaft Position Sensor Voltage	II	L5P
87	0.5	BN / GN	1174	Oil Level Switch Signal	II	L5P
88 - 90	—	—	—	Not Occupied	—	—
91	0.5	BU / GN	7071	Fuel Heater Control	II	L5P
92	0.5	BN / VT	3656	EGR Cooler Bypass Valve Close Control	II	L5P
93	0.5	YE / GN	3655	EGR Cooler Bypass Valve Open Control	II	L5P
94	0.5	VT / BK	5746	Exhaust Gas Recirculation Valve Low Control	II	L5P
95	0.5	WH / VT	5764	Exhaust Gas Recirculation Valve High Control	II	L5P
96	0.75	BU / WH	2530	Fuel Rail Pressure Solenoid Valve Control	II	L5P

K20 Engine Control Module X3 (L5P)



2474736

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 35386296
Service Connector: 13577545
Description: 80-Way F MX123 Series, Sealed(BK with BU Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19354746	J-35616-64B (L-BU)	J-38125-215A

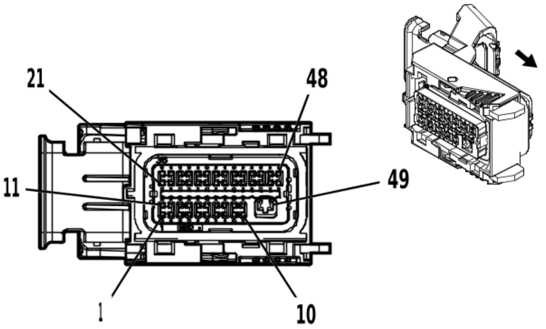
K20 Engine Control Module X3 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN	3099	Diesel Exhaust Fluid Dosing Valve High Control	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	GN / BU	3889	Powertrain Sensor Bus Relay Control	I	—
4 - 11	—	—	—	Not Occupied	—	—
12	0.5	YE / BK	3682	Charge Air Cooler Inlet Temperature Sensor Low Reference	I	—
13	0.5	YE / BU	3680	Charge Air Cooler Outlet Temperature Sensor Low Reference	I	—
14	0.5	BK / YE	6275	Exhaust Gas Recirculation Temperature Sensor 2 Low Reference	I	—
15	0.5	BK / BU	6274	Exhaust Gas Recirculation Temperature Sensor Low Reference	I	—
16	0.5	BK / VT	3661	Exhaust Gas Temperature Sensor 5 Low Reference	I	—
17	0.5	BK / GY	3659	Exhaust Gas Temperature Sensor 4 Low Reference	I	—
18	0.5	BK / GN	3657	Exhaust Gas Temperature Sensor 3 Low Reference	I	—
19	0.5	BK / BU	6783	Exhaust Gas Temperature Sensor 2 Low Reference	I	—
20	0.5	BK / BN	6782	Exhaust Gas Temperature Sensor 1 Low Reference	I	—
21	0.75	BN / WH	3100	Diesel Exhaust Fluid Dosing Valve Low Control	I	—
22	0.5	YE / BU	1465	Secondary Fuel Pump Relay Control	I	—
23 - 24	—	—	—	Not Occupied	—	—

K20 Engine Control Module X3 (L5P) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
25	0.5	WH / GN	6142	Power Take-Off Engine Shutdown Signal	I	—
26 - 27	—	—	—	Not Occupied	—	—
28	0.5	WH / RD	3201	Throttle Inlet Absolute Pressure Sensor 5V Reference	I	—
29	0.5	YE / WH	3200	Throttle Inlet Absolute Pressure Sensor Signal	I	—
30 - 31	—	—	—	Not Occupied	—	—
32	0.5	GN	3683	Charge Air Cooler Inlet Temperature Sensor Signal	I	—
33	0.5	BN	3681	Charge Air Cooler Outlet Temperature Sensor Signal	I	—
34	0.5	YE / GN	3236	Exhaust Gas Recirculation Temperature Sensor 2 Signal	I	—
35	0.5	WH / BN	3237	Exhaust Gas Recirculation Temperature Sensor Signal	I	—
36	0.5	BU / GY	3660	Exhaust Gas Temperature Sensor 5 Signal	I	—
37	0.5	VT / BN	3658	Exhaust Gas Temperature Sensor 4 Signal	I	—
38	0.5	GY / GN	5378	Exhaust Gas Temperature Sensor 3 Signal	I	—
39	0.5	BU / GN	5377	Exhaust Gas Temperature Sensor 2 Signal	I	—
40	0.5	BU / WH	5277	Exhaust Gas Temperature Sensor 1 Signal	I	—
41 - 44	—	—	—	Not Occupied	—	—
45	0.5	BK / GY	3927	Transmission Internal Mode Switch Feedback Signal	I	—
46	—	—	—	Not Occupied	—	—
47	0.5	YE / BU	3992	Internal Mode Switch Voltage Supply A	I	—
48 - 54	—	—	—	Not Occupied	—	—
55	0.5	WH / BU	5726	Ignition Mode Switch Mode Control Backup	I	—
56 - 64	—	—	—	Not Occupied	—	—
65	0.5	BK / BN	6141	Cooling Fan Speed Sensor Low Reference	I	—
66	0.5	BU / VT	2364	Cooling Fan Speed Signal	I	—
67	0.5	GY / RD	2365	Cooling Fan Speed Sensor 5V Reference	I	—
68 - 75	—	—	—	Not Occupied	—	—
76	0.5	BK / YE	6055	Exhaust Pressure Sensor 1 Low Reference	I	—
77	0.5	BU	6053	Exhaust Pressure Sensor 1 Signal	I	—
78	0.5	WH / RD	6054	Exhaust Pressure Sensor 1 5V Reference	I	—
79 - 80	—	—	—	Not Occupied	—	—

K20 Engine Control Module X1 (L8T)



4596458

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33315785
Service Connector: 19368142
Description: 49-Way F 0.64, 2.8 Series, Sealed(BK with BU Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13587518	J-35616-35 (VT)	J-38125-11A
II	19351723	J-35616-64B (L-BU)	J-38125-213
III	Not required	No Tool Required	No Tool Required

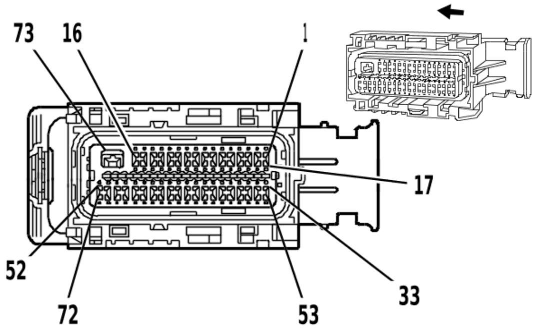
K20 Engine Control Module X1 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN / WH	492	Mass Air Flow Sensor Signal	II	—
2	—	—	—	Not Occupied	—	—
3	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	II	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.5	WH / BU	6311	Cruise/ETC/TCC Brake Signal	II	—
7	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	—
8	0.5	BN / WH	419	Check Engine Indicator Control	II	—
9	0.5	YE	5991	Powertrain Relay Coil Control	II	—
10 - 11	—	—	—	Not Occupied	—	—
12	0.5	BU / GY	636	Ambient Air Temperature Sensor Signal	II	—
13	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	II	—
14	0.5	WH / GN	5380	Brake Position Sensor Signal	II	—
15	—	—	—	Not Occupied	—	—
16	0.5	WH / GY	1786	Transmission Park/Neutral Signal 1	II	—
17	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	—
18	0.5	WH / GY	459	A/C Compressor Clutch Relay Control	II	—
19 - 20	—	—	—	Not Occupied	—	—
21	— 0.5	WH / BN GN / BU	4108 428	Driver Mode Switch Signal EVAP Canister Purge Solenoid Control	III II	— —
22	0.5	YE / BU	1465	Secondary Fuel Pump Relay Control	II	—

K20 Engine Control Module X1 (L8T) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
23	0.5	BK / GN	580	Engine Control Sensors Low Reference 2	II	—
24	0.5	BK / BU	1271	Accelerator Pedal Position Low Reference 1	II	—
25 - 27	—	—	—	Not Occupied	—	—
28	0.5	BN / GN	1174	Oil Level Switch Signal	II	—
29	—	—	—	Not Occupied	—	—
30	0.5	BK / VT	1272	Accelerator Pedal Position Low Reference 2	II	—
31	—	—	—	Not Occupied	—	—
32	0.75	VT / BU	5291	Powertrain Main Relay Fused Supply Voltage 2	II	—
33	0.5	VT / YE	5985	Accessory Wake-Up Serial Data	II	—
34	0.5	RD / BN	440	Battery Positive Voltage	II	—
35	—	—	—	Not Occupied	—	—
36	0.5	YE / BK	625	Starter Enable Relay Control	II	—
37	0.5	GN / GY	465	Fuel Pump Primary Relay Control	II	—
38	0.5	WH / RD	1164	Accelerator Pedal Position 5V Reference 1	II	—
39	0.5	YE / WH	1161	Accelerator Pedal Position Signal 1	II	—
40	0.5	YE / BN	331	Oil Pressure Sensor Signal	II	—
41	0.5	GN	380	A/C Refrigerant Pressure Sensor Signal	II	—
42 - 43	—	—	—	Not Occupied	—	—
44	0.5	GN / WH	1162	Accelerator Pedal Position Signal 2	II	—
45	0.5	BN / RD	1274	Accelerator Pedal Position 5V Reference 2	II	—
46	0.5	YE	4063	Hood Status A Signal	II	—
47	0.5	VT / GN	439	Run/Crank Ignition 1 Voltage	II	—
48	0.75	VT / BU	5290	Powertrain Main Relay Fused Supply Voltage 1	II	—
49	2	VT / BU	5290	Powertrain Main Relay Fused Supply Voltage 1	I	—

K20 Engine Control Module X2 (L8T)



1673472

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 15499466
Service Connector: 19333090
Description: 73-Way F 0.64, 2.8 Series, Sealed(BK with BK Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13587518	J-35616-35 (VT)	J-38125-11A
II	19354746	J-35616-64B (L-BU)	J-38125-215A

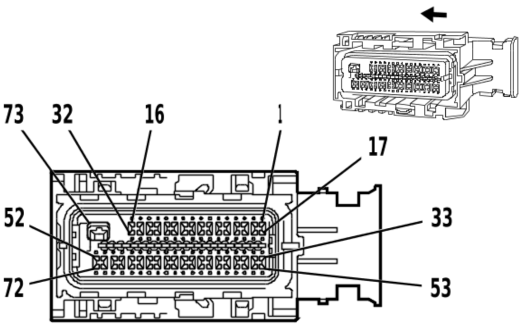
K20 Engine Control Module X2 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN / YE	3212	HO2S Heater Low Control Bank 2 Sensor 1	II	—
2	—	—	—	Not Occupied	—	—
3	0.5	BK / YE	548	Engine Control Sensors Low Reference 1	II	—
4 - 6	—	—	—	Not Occupied	—	—
7	0.5	GN / WH	4622	Engine Control Module LIN Bus 2	II	—
8	0.5	GN / VT	4621	Engine Control Module LIN Bus 1	II	—
9	—	—	—	Not Occupied	—	—
10	0.5	VT / GY	3110	HO2S High Signal Bank 1 Sensor 1	II	—
11	0.5	WH / BK	3111	HO2S Low Signal Bank 1 Sensor 1	II	—
12	0.5	YE / BU	2124	Ignition Control 4	II	—
13	0.5	BN / BU	2126	Ignition Control 6	II	—
14 - 15	—	—	—	Not Occupied	—	—
16	0.75	VT / BU	5290	Powertrain Main Relay Fused Supply Voltage 1	II	—
17	0.5	GY / WH	3113	HO2S Heater Low Control Bank 1 Sensor 1	II	—
18 - 20	—	—	—	Not Occupied	—	—
21	0.5	WH / BN	2203	Enhanced Driver Mode 2 Switch Signal	II	—
22 - 25	—	—	—	Not Occupied	—	—
26	0.5	VT / WH	3210	HO2S High Signal Bank 2 Sensor 1	II	—
27	0.5	YE / WH	3211	HO2S Low Signal Bank 2 Sensor 1	II	—
28	0.5	GN / BU	2123	Ignition Control 3	II	—
29	0.5	BU / GY	2125	Ignition Control 5	II	—

K20 Engine Control Module X2 (L8T) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
30	0.5	BK / GY	2130	Ignition Control Low Reference Bank 2	II	—
31 - 32	—	—	—	Not Occupied	—	—
33	0.5	WH / BN	3223	HO2S Heater Low Control Bank 2 Sensor 2	II	—
34	—	—	—	Not Occupied	—	—
35	0.5	BU	179	Engine Oil Pump Control	II	—
36	—	—	—	Not Occupied	—	—
37	0.75	VT / BU	5294	Powertrain Main Relay Fused Supply Voltage 5	II	—
38	—	—	—	Not Occupied	—	—
39	0.5	WH / RD	480	Engine Control Vehicle Sensors 5 Volt Reference 1	II	—
40 - 45	—	—	—	Not Occupied	—	—
46	0.5	YE / BU	3221	HO2S Low Signal Bank 2 Sensor 2	II	—
47	0.5	VT / GN	3220	HO2S High Signal Bank 2 Sensor 2	II	—
48 - 49	—	—	—	Not Occupied	—	—
50	0.75	BK / GY	2303	Knock Sensor Low Reference 2	II	—
51	0.75	BK / YE	1716	Knock Sensor Low Reference 1	II	—
52	0.5	BN / WH	582	Throttle Actuator Close Control	II	—
53	0.5	GY / WH	3122	HO2S Heater Low Control Bank 1 Sensor 2	II	—
54 - 58	—	—	—	Not Occupied	—	—
59	0.5	BU / RD	460	Engine Control Sensors 5 Volt Reference 1	II	—
60 - 65	—	—	—	Not Occupied	—	—
66	0.5	WH / YE	3121	HO2S Low Signal Bank 1 Sensor 2	II	—
67	0.5	VT / BU	3120	HO2S High Signal Bank 1 Sensor 2	II	—
68 - 69	—	—	—	Not Occupied	—	—
70	0.75	WH / GY	1876	Knock Sensor 2 Signal	II	—
71	0.75	VT / GY	496	Knock Sensor 1 Signal	II	—
72	0.5	YE	581	Throttle Actuator Open Control	II	—
73	2.5	BK / WH	451	Signal Ground	I	—

K20 Engine Control Module X3 (L8T)



1650395

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 15497996
Service Connector: 19333091
Description: 73-Way F 0.64, 2.8 Series, Sealed(BK with GY Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13587518	J-35616-35 (VT)	J-38125-11A
II	19354746	J-35616-64B (L-BU)	J-38125-215A

K20 Engine Control Module X3 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 4	—	—	—	Not Occupied	—	—
5	0.5	VT / BN	5284	Intake Camshaft Position Actuator Solenoid Valve 1	II	—
6	0.5	VT / GN	4320	Powertrain Sensor Bus Enable	II	—
7	—	—	—	Not Occupied	—	—
8	0.5	YE / VT	5275	Intake Camshaft Position Sensor 1	II	—
9	0.5	GY / BU	5300	Intake Camshaft Position Sensor 1 Voltage Reference	II	—
10	0.5	GN	6271	Crankshaft Position Sensor Signal	II	—
11	0.5	VT / BU	6091	Crankshaft Position Sensor Replicated Signal	II	—
12	0.5	BU / WH	2122	Ignition Control 2	II	—
13	0.5	VT / WH	2128	Ignition Control 8	II	—
14	0.5	BN	25	Charge Indicator Control	II	—
15	—	—	—	Not Occupied	—	—
16	0.75	YE	7301	High Pressure Fuel Pump High Control	II	—
17 - 18	—	—	—	Not Occupied	—	—
19	0.5	BN / WH	6354	Replicated Transmission Output Speed 128K Signal	II	—
20	—	—	—	Not Occupied	—	—
21	0.5	BK / BN	6753	Camshaft Position Actuator Solenoid Valve W Low Reference	II	—
22 - 23	—	—	—	Not Occupied	—	—

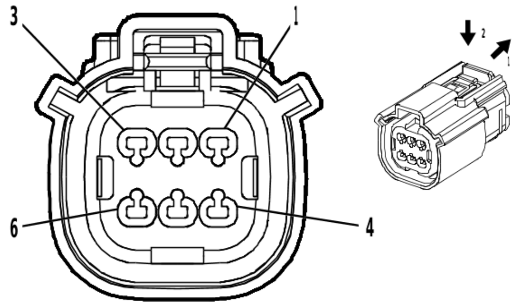
K20 Engine Control Module X3 (L8T) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
24	0.5	BK / GN	5301	Intake Camshaft Position Sensor Low Reference 1	II	—
25	0.5	VT / BU	6270	Crankshaft Position Sensor Voltage	II	—
26	0.5	BK / VT	6272	Crankshaft Position Sensor Low Reference	II	—
27	—	—	—	Not Occupied	—	—
28	0.5	GN / GY	2127	Ignition Control 7	II	—
29	0.5	BU / VT	2121	Ignition Control 1	II	—
30	0.5	BK / BU	2129	Ignition Control Low Reference Bank 1	II	—
31	—	—	—	Not Occupied	—	—
32	0.75	VT / BK	7300	High Pressure Fuel Pump Low Control	II	—
33 - 35	—	—	—	Not Occupied	—	—
36	0.5	BK / BN	2752	Throttle Position Sensor Low Reference	II	—
37	0.5	BK / GN	469	Manifold Absolute Pressure Sensor Low Reference	II	—
38 - 39	—	—	—	Not Occupied	—	—
40	0.5	BN / BU	357	Oil Temperature Sensor Signal	II	—
41 - 42	—	—	—	Not Occupied	—	—
43	0.5	BK / GY	626	Engine Control Vehicle Sensors Low Reference 1	II	—
44	0.75	VT / BU	5292	Powertrain Main Relay Fused Supply Voltage 3	II	—
45	0.75	GN	4803	Direct Fuel Injector High Voltage Control Cylinder 3	II	—
46	0.75	GY / BU	4804	Direct Fuel Injector High Voltage Control Cylinder 4	II	—
47	0.75	WH / GN	4805	Direct Fuel Injector High Voltage Control Cylinder 5	II	—
48	0.75	GN / VT	4806	Direct Fuel Injector High Voltage Control Cylinder 6	II	—
49	0.75	BU	4802	Direct Fuel Injector High Voltage Control Cylinder 2	II	—
50	0.75	YE / GY	4807	Direct Fuel Injector High Voltage Control Cylinder 7	II	—
51	0.75	GY	4808	Direct Fuel Injector High Voltage Control Cylinder 8	II	—
52	0.75	BN	4801	Direct Fuel Injector High Voltage Control Cylinder 1	II	—
53 - 54	—	—	—	Not Occupied	—	—
55	0.5	BN / RD	2701	Throttle Position Sensor 5V Reference	II	—
56	0.5	BU / WH	3630	Throttle Position Sensor SENT 1 Signal	II	—
57	0.5	GY / RD	2704	Manifold Absolute Pressure Sensor 5V Reference	II	—
58	0.5	GN / WH	432	Manifold Absolute Pressure Sensor Signal	II	—
59 - 60	—	—	—	Not Occupied	—	—
61	0.5	BU	410	Engine Coolant Temperature Sensor Signal	II	—
62	—	—	—	Not Occupied	—	—
63	0.5	BU / WH	2918	Fuel Rail Pressure Sensor Signal	II	—
64	0.5	GY	23	Generator Field Duty Cycle Signal	II	—
65	0.75	GN / BK	4903	Direct Fuel Injector High Voltage Supply Cylinder 3	II	—

K20 Engine Control Module X3 (L8T) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
66	0.75	BU / WH	4904	Direct Fuel Injector High Voltage Supply Cylinder 4	II	—
67	0.75	GN / WH	4905	Direct Fuel Injector High Voltage Supply Cylinder 5	II	—
68	0.75	VT	4906	Direct Fuel Injector High Voltage Supply Cylinder 6	II	—
69	0.75	BN / GN	4902	Direct Fuel Injector High Voltage Supply Cylinder 2	II	—
70	0.75	WH / YE	4907	Direct Fuel Injector High Voltage Supply Cylinder 7	II	—
71	0.75	WH / GN	4908	Direct Fuel Injector High Voltage Supply Cylinder 8	II	—
72	0.75	BN / WH	4901	Direct Fuel Injector High Voltage Supply Cylinder 1	II	—
73	2.5	BK / WH	451	Signal Ground	I	—

K22 Cooling Fan Control Module



4574736

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33367609
Service Connector: 13578533
Description: 6-Way F 1.5 MX Series, Sealed(BK)

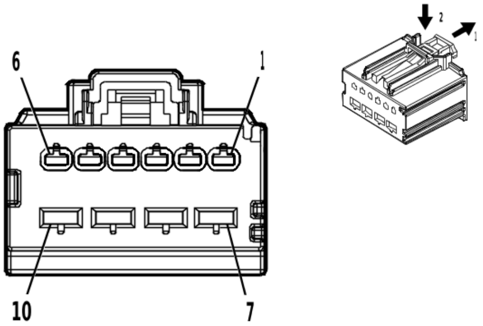
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required
II	Not required	J-35616-2A (GY)	No Tool Required

K22 Cooling Fan Control Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	BK	4450	Ground	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	WH	2368	Cooling Fan Control Signal	II	—
4	0.5	BK / BN	6141	Cooling Fan Speed Sensor Low Reference	I	—
5	0.5	BU / VT	2364	Cooling Fan Speed Signal	I	—
6	0.5	GY / RD	2365	Cooling Fan Speed Sensor 5V Reference	I	—

K29F Seat Heating Control Module - Front X1 (KA1)



5035058

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 31372-1600
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 1.5, 2.8 MX Series(BK)

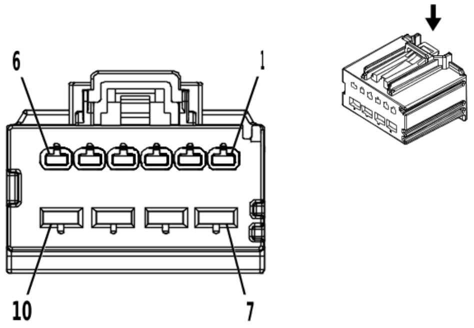
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required

K29F Seat Heating Control Module - Front X1 (KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	WH / BN	2481	Passenger Seat Back Heating Element Control	I	—
2	0.75	BN / BU	2479	Passenger Seat Heating Element Control	I	—
3	0.75	GY / BK	2480	Passenger Seat Heating Element Low Reference	I	—
4	0.75	BN / BK	2078	Driver Seat Heating Element Low Reference	I	—
5	0.75	BN	2432	Driver Seat Back Heating Element Control	I	—
6	0.75	BN / VT	2077	Driver Seat Heating Element Control	I	—
7	0.75	RD	6140	Battery Positive Voltage	II	—
8	0.75	BK	1250	Ground	II	—
9	—	—	—	Not Occupied	—	—
10	0.75	RD / GN	5140	Battery Positive Voltage	II	—

K29F Seat Heating Control Module - Front X1 (KA6)



3791446

Connector Part Information

Harness Type: Second Row Seat Heater Control Wiring Harness
OEM Connector: 31372-1000
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 1.5, 2.8 MX Series(BK)

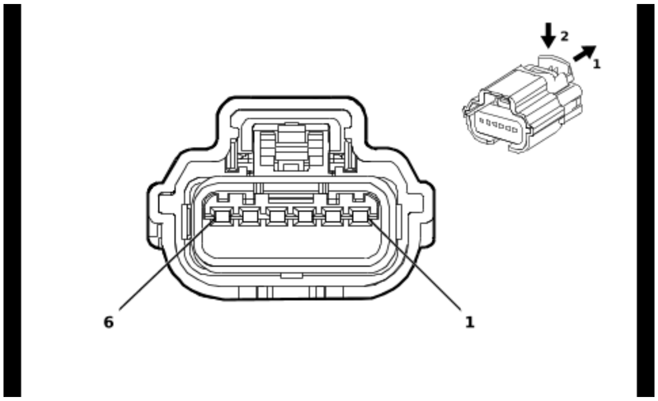
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required

K29F Seat Heating Control Module - Front X1 (KA6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.75	GN / BN	2296	Right Rear Seat Cushion Heating Element Control	I	—
3	0.75	GN / BK	2297	Right Rear Seat Cushion Heating Element Low Reference	I	—
4	0.75	BN / BK	2295	Left Rear Seat Cushion Heating Element Low Reference	I	—
5	—	—	—	Not Occupied	—	—
6	0.75	GY	2294	Left Rear Seat Cushion Heating Element Control	I	—
7	0.75	RD / YE	240	Battery Positive Voltage	II	—
8	1	BK	1150	Ground	II	—
9	—	—	—	Not Occupied	—	—
10	0.75	RD / VT	340	Battery Positive Voltage	II	—

K29F Seat Heating Control Module - Front X2 (KA1)



5157678

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 31404-7132
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 64 Series, Sealed(BK)

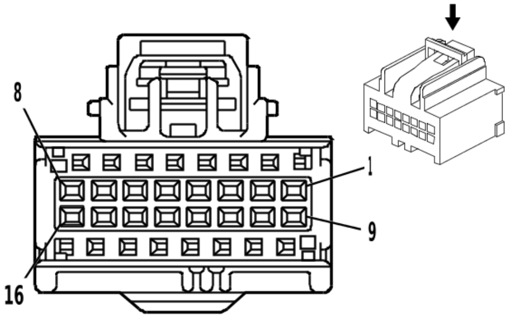
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required
II	Not required	No Tool Required	No Tool Required

K29F Seat Heating Control Module - Front X2 (KA1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK / YE	2080	Driver Heated Seat Thermistor Low Reference	I	—
2	0.5	BK / GY	2435	Passenger Heated Seat Thermistor Low Reference	I	—
3	—	BU	2425	Driver Seat Back Heating Temperature Sensor Signal	II	—
4	0.5	WH / BU	2436	Passenger Seat Back Heating Temperature Sensor Signal	I	—
5	0.5	WH / GY	2434	Passenger Seat Heating Temperature Sensor Signal	I	—
6	0.5	YE / GY	2079	Driver Seat Heating Temperature Sensor Signal	I	—
9	—	GN / VT	5906	Driver Seat Blower Motor Control 1	II	—
10	—	WH	5908	Passenger Seat Blower Motor Control 1	II	—
11	—	BK / VT	2426	Driver Heated Back Thermistor Low Reference	II	—
12	—	BK / GN	2482	Passenger Heated Back Thermistor Low Reference	II	—

K29F Seat Heating Control Module - Front X2 (KA6)



1653409

Connector Part Information

Harness Type: Second Row Seat Heater Control Wiring Harness
OEM Connector: 7283-9076-30
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 0.64 Kaizen Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

K29F Seat Heating Control Module - Front X2 (KA6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BU / WH	7048	Left Rear Cushion Thermistor Feedback Signal	I	—
2	0.75	WH / BK	7054	Right Rear Cushion Thermistor Feedback Signal	I	—
3 - 4	—	—	—	Not Occupied	—	—
5	0.75	YE / WH	7053	Right Rear Seat Cushion Temperature Sensor Signal	I	—
6	0.75	WH / BU	7047	Left Rear Seat Cushion Temperature Sensor Signal	I	—
7	0.5	BK	1150	Ground	I	—
8	0.5	GN / BU	6133	Body Control Module LIN Bus 2	I	—
9 - 16	—	—	—	Not Occupied	—	—

K29R Seat Heating Control Module - Rear X1 (KA6)

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Connector Part Information

Harness Type: Rear SeatWiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K29R Seat Heating Control Module - Rear X1 (KA6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
2	—	GN / BN	2296	Right Rear Seat Cushion Heating Element Control	I	—
3	—	GN / BK	2297	Right Rear Seat Cushion Heating Element Low Reference	I	—
4	—	BN / BK	2295	Left Rear Seat Cushion Heating Element Low Reference	I	—
6	—	GY	2294	Left Rear Seat Cushion Heating Element Control	I	—
7	—	RD / YE	240	Battery Positive Voltage	I	—
8	—	BK	1150	Ground	I	—
10	—	RD / VT	340	Battery Positive Voltage	I	—

K29R Seat Heating Control Module - Rear X2 (KA6)

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Connector Part Information

Harness Type: Rear SeatWiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K29R Seat Heating Control Module - Rear X2 (KA6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BU / WH	7048	Left Rear Cushion Thermistor Feedback Signal	I	—
2	—	WH / BK	7054	Right Rear Cushion Thermistor Feedback Signal	I	—
5	—	YE / WH	7053	Right Rear Seat Cushion Temperature Sensor Signal	I	—
6	—	WH / BU	7047	Left Rear Seat Cushion Temperature Sensor Signal	I	—
7	—	BK	1150	Ground	I	—
8	—	GN / BU	6133	Body Control Module LIN Bus 2	I	—

K32 Steering Wheel Heating Control Module X1 (KI3)

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Connector Part Information

Harness Type: Steering Wheel Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K32 Steering Wheel Heating Control Module X1 (KI3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	WH / YE	5888	Steering Wheel Heating High Control	I	—
2	—	BU / WH	1354	Heated Steering Wheel Low Reference	I	—
3	—	VT / BU	5886	Steering Wheel Heating Temperature Sensor Signal	I	—
4	—	YE / RD	5885	Steering Wheel Heating Voltage Reference	I	—
5	—	YE / GY	5883	Steering Wheel Heating Switch Signal	I	—
6	—	BN / WH	5884	Steering Wheel Heating Switch LED Control	I	—

K32 Steering Wheel Heating Control Module X2 (KI3)

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Connector Part Information

Harness Type: Steering Wheel Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way

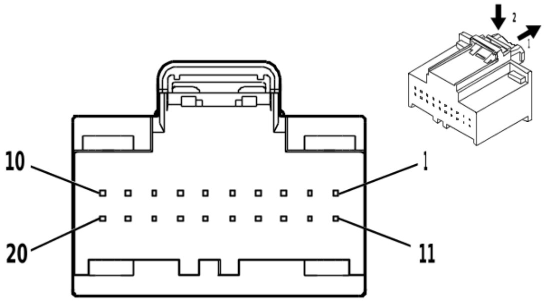
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K32 Steering Wheel Heating Control Module X2 (KI3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	VT / WH	1139	Run/Crank Ignition 1 Voltage	I	—
2	—	BK	1850	Ground	I	—
3	—	BK / WH	1851	Signal Ground	I	—
4	—	WH	4119	HVAC Control Module LIN Bus 2	I	—

K33 HVAC Control Module X1



5109511

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35162722
Service Connector: 13525993
Description: 20-Way F 0.64 Series(GN)

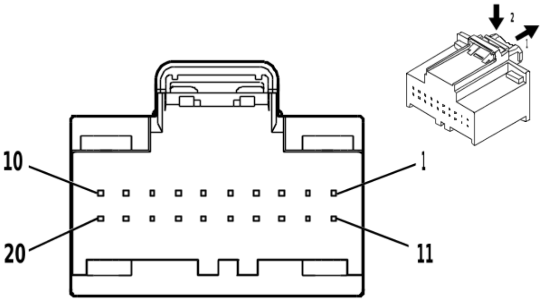
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13584547	J-35616-64B (L-BU)	J-38125-215A

K33 HVAC Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.35	BU / WH	734	Inside Air Temperature Sensor Signal	I	—
5 - 13	—	—	—	Not Occupied	—	—
14	0.35	GY	590	Driver Solar Sensor Signal	I	—
15 - 20	—	—	—	Not Occupied	—	—

K33 HVAC Control Module X2



5109514

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35162720
Service Connector: 13525992
Description: 20-Way F 0.64 Series(BN)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13584547	J-35616-64B (L-BU)	J-38125-215A

K33 HVAC Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD / VT	3340	Battery Positive Voltage	I	—
2	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
3	—	—	—	Not Occupied	—	—
4	0.35	GN / YE	7531	HVAC Control Module LIN Bus 1	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	GN / BU	4119	HVAC Control Module LIN Bus 2	I	—
7	0.35	VT	3195	Auxiliary Heater Control	I	—
8	0.5	BK	1050	Ground	I	—
9	0.35	VT / BN	300	Run Ignition 3 Voltage	I	—
10	0.35	BU / YE	7574	A/C Compressor Solenoid Valve Control	I	—
11	0.35	BU / BN	7573	A/C Compressor Solenoid Valve Control	I	—
12 - 14	—	—	—	Not Occupied	—	—
15	0.35	BU / GY	754	Blower Motor Speed Control	I	—
16 - 17	—	—	—	Not Occupied	—	—
18	0.35	BK / GN	7567	Solar Sensor Low Reference	I	—
19	0.5	BN / VT	193	Rear Defogger Relay Control	I	—
20	—	—	—	Not Occupied	—	—

K33 HVAC Control Module X3

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Connector Part Information

Harness Type: HVAC Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 15-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K33 HVAC Control Module X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
2	—	GY	3165	Mode Door Actuator Control 1	I	—
3	—	BN / GN	3166	Mode Door Actuator Control 2	I	—
4	—	BU / BN	3167	Mode Door Actuator Control 3	I	—
5	—	BN	3168	Mode Door Actuator Control 4	I	—
9	—	BK / YE	1791	Air Temperature Door Low Reference	I	—
11	—	WH / BK	3169	Air Temperature Door Actuator Control 1	I	—
12	—	VT / GN	3170	Air Temperature Door Actuator Control 2	I	—
13	—	YE / GN	3171	Air Temperature Door Actuator Control 3	I	—
14	—	GY / BU	3172	Air Temperature Door Actuator Control 4	I	—
15	—	BN / VT	7572	HVAC Door Actuator Control	I	—
16	—	BU / GY	3173	Air Inlet Door Actuator Control 1	I	—
17	—	BN / WH	3174	Air Inlet Door Actuator Control 2	I	—
18	—	YE	3175	Air Inlet Door Actuator Control 3	I	—
19	—	WH	3176	Air Inlet Door Actuator Control 4	I	—
20	—	BN	6137	A/C Evaporator Temperature Sensor Signal	I	—

K33 HVAC Control Module X4

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Connector Part Information

Harness Type: HVAC Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K33 HVAC Control Module X4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
5	—	YE / BK	3181	Passenger Air Temperature Door Actuator Control 1	I	—
6	—	WH / BU	3182	Passenger Air Temperature Door Actuator Control 2	I	—
7	—	WH / YE	3183	Passenger Air Temperature Door Actuator Control 3	I	—
8	—	VT / GY	3184	Passenger Air Temperature Door Actuator Control 4	I	—

K34 Glow Plug Control Module X1 (L5P)

—

Connector Part Information

Harness Type: Glow Plug Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way

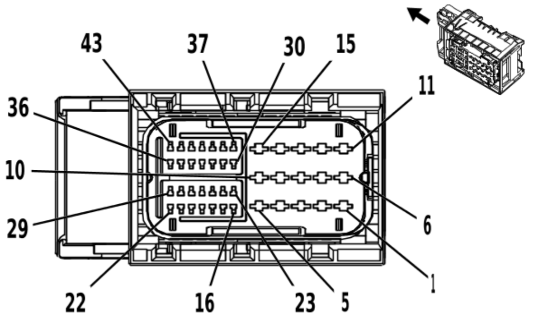
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K34 Glow Plug Control Module X1 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	RD / VT	842	Battery Positive Voltage	I	—

K34 Glow Plug Control Module X2



Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 12639358
Service Connector: 13576417
Description: 43-Way F 1.2, 2.8 Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13576372	J-35616-4A (PU)	J-38125-556
II	19331734	J-35616-12 (BU)	J-38125-11A

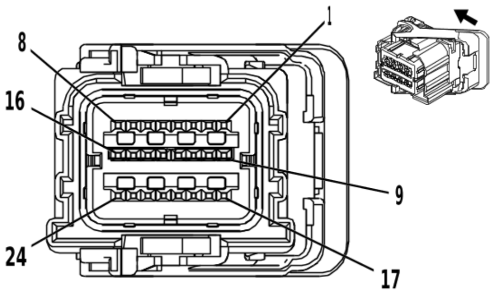
K34 Glow Plug Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	2	GY / YE	1584	Glow Plug 4 Control	I	L5P
3	2	GY / GN	1583	Glow Plug 3 Control	I	L5P
4	2	GY / BN	1582	Glow Plug 2 Control	I	L5P
5	2	GY / BU	1581	Glow Plug 1 Control	I	L5P
6 - 9	—	—	—	Not Occupied	—	—
10	2	BK	250	Ground	I	L5P
11	—	—	—	Not Occupied	—	—
12	2	GY / WH	1585	Glow Plug 5 Control	I	L5P
13	2	GY / VT	1586	Glow Plug 6 Control	I	L5P
14	2	WH / BK	1587	Glow Plug 7 Control	I	L5P
15	2	WH / BU	1588	Glow Plug 8 Control	I	L5P
16	0.5	BK	C92	Cavity Seal	II	L5P
17	0.5	BK	C93	Cavity Seal	II	L5P
18	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	L5P
19	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	L5P
20 - 22	—	—	—	Not Occupied	—	—
23	0.5	BK	D23	Cavity Seal	II	L5P
24	0.5	BK	D24	Cavity Seal	II	L5P
25	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	L5P
26	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	L5P

K34 Glow Plug Control Module X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
27 - 29	—	—	—	Not Occupied	—	—
30	0.5	BK	D30	Cavity Seal	II	L5P
31	0.5	BK	D31	Cavity Seal	II	L5P
32	—	—	—	Not Occupied	—	—
33	0.5	VT / BK	2139	Run/Crank Ignition 1 Voltage	II	L5P
34 - 36	—	—	—	Not Occupied	—	—
37	0.5	BK	D37	Cavity Seal	II	L5P
38	0.5	BK	D38	Cavity Seal	II	L5P
39	—	—	—	Not Occupied	—	—
40	0.5	VT / YE	5985	Accessory Wake-Up Serial Data	II	L5P
41 - 43	—	—	—	Not Occupied	—	—

K36 Inflatable Restraint Sensing and Diagnostic Module X1



3240106

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35036798
Service Connector: 84769281
Description: 24-Way F 0.64 Series, Sealed(YE)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19328872	J-35616-64B (L-BU)	J-38125-11A

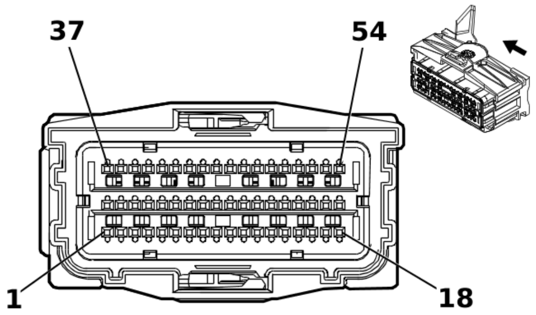
K36 Inflatable Restraint Sensing and Diagnostic Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	OG / GN	3023	Steering Wheel Air Bag Stage 2 High Control	I	—
2	0.35	WH / OG	3022	Steering Wheel Air Bag Stage 2 Low Control	I	—
3	0.35	BN / OG	3020	Steering Wheel Air Bag Stage 1 Low Control	I	—
4	0.35	OG / VT	3021	Steering Wheel Air Bag Stage 1 High Control	I	—
5	0.35	YE / OG	3025	Passenger Instrument Panel Air Bag Stage 1 High Control	I	—
6	0.35	OG / WH	3024	Passenger Instrument Panel Air Bag Stage 1 Low Control	I	—
7	0.35	OG / VT	3026	Passenger Instrument Panel Air Bag Stage 2 Low Control	I	—
8	0.35	GY / OG	3027	Passenger Instrument Panel Air Bag Stage 2 High Control	I	—
9	0.5	RD / GN	4440	Battery Positive Voltage	I	—
10	0.35	VT / WH	5234	Passenger Seat Belt Indicator Control	I	—
11	0.35	BU	2307	Passenger Air Bag On Indicator Control	I	—
12	0.35	GN	2308	Passenger Air Bag Off Indicator Control	I	—
13	0.5	BU / WH	3119	Roof Rail Air Bag Disable Switch Signal	I	—
14	0.5	BN / WH	3895	Roof Rail Air Bag Disable Switch Low Reference	I	—
15	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
16	—	—	—	Not Occupied	—	—
17	0.35	WH / BU	5986	Serial Data Communication Enable	I	—
18	0.5	BU / YE	6105	High Speed GMLAN Serial Data [+] 2	I	—
19	0.5	BK / WH	2551	Signal Ground	I	—

K36 Inflatable Restraint Sensing and Diagnostic Module X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
20	0.5	WH	6106	High Speed GMLAN Serial Data [-] 2	I	—
21 - 24	—	—	—	Not Occupied	—	—

K36 Inflatable Restraint Sensing and Diagnostic Module X2



5197939

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35036051
Service Connector: 84769282
Description: 54-Way F 0.64 Series, Sealed(YE)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19328872	J-35616-64B (L-BU)	J-38125-11A
II	Not required	No Tool Required	No Tool Required

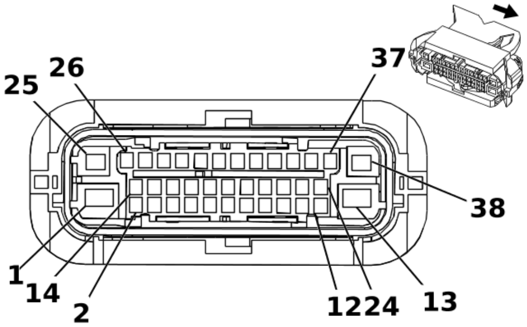
K36 Inflatable Restraint Sensing and Diagnostic Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 8	—	—	—	Not Occupied	—	—
9	0.5	OG / YE	3481	Driver Seat Belt Anchor Pretensioner High Control	I	—
10	0.5	YE / OG	3482	Driver Seat Belt Anchor Pretensioner Low Control	I	—
11	0.5	GY / OG	3480	Passenger Seat Belt Anchor Pretensioner Low Control	I	—
12	0.5	OG / BN	3479	Passenger Seat Belt Anchor Pretensioner High Control	I	—
13	0.5	OG / BU	3068	Driver Seat Side Air Bag High Control	I	—
14	0.5	GN / OG	3069	Driver Seat Side Air Bag Low Control	I	—
15	0.35	BN / OG	3067	Passenger Seat Side Air Bag Low Control	I	—
16	0.35	OG / GY	3066	Passenger Seat Side Air Bag High Control	I	—
17	0.5	OG / GN	5019	Left Front Roof Rail Air Bag High Control	I	—
18	0.5	VT / OG	5020	Left Front Roof Rail Air Bag Low Control	I	—
19	0.35	OG / GN	2132	Left Front Side Impact Sensor Signal	I	—
20	0.35	BK / OG	6628	Left Front Side Impact Sensor Low Reference	I	—
21	0.35	BK / OG	6629	Right Front Side Impact Sensor Low Reference	I	—
22	0.35	BN / OG	2134	Right Front Side Impact Sensor Signal	I	—
23	0.5	OG / YE	354	Left Front Impact Discriminating Sensor Signal	I	—
24	0.5	BK / OG	5045	Left Front Impact Discriminating Sensor Low Reference	I	—

K36 Inflatable Restraint Sensing and Diagnostic Module X2 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
25	0.5	BK / OG	5600	Right Front Impact Discriminating Sensor Low Reference	I	—
26	0.5	OG / GN	1409	Right Front Impact Discriminating Sensor Signal	I	—
27	0.35	OG / BU	6622	Left Rear Side Impact Sensor Signal	I	—
28	0.35	BK / OG	6623	Left Rear Side Impact Sensor Low Reference	I	—
29	0.35	BK / OG	6627	Right Rear Side Impact Sensor Low Reference	I	—
30	0.35	OG / WH	6626	Right Rear Side Impact Sensor Signal	I	—
31 - 36	—	—	—	Not Occupied	—	—
37	0.5	OG / WH	3477	Driver Seat Belt Retractor Pretensioner High Control	I	—
38	0.5	GY / OG	3478	Driver Seat Belt Retractor Pretensioner Low Control	I	—
39	0.5	WH / OG	3476	Passenger Seat Belt Retractor Pretensioner Low Control	I	—
40	0.5	OG / GN	3475	Passenger Seat Belt Retractor Pretensioner High Control	I	—
41	0.35	OG / BN	238	Driver Seat Belt Switch Signal	I	—
42	—	OG / GN	5055	Driver Seat Position Switch Signal	II	—
43	0.35	BK / OG	1363	Driver Seat Belt Switch Low Reference	I	—
44	0.35	BK / OG	1361	Passenger Seat Belt Switch Low Reference	I	—
45	0.35	OG / VT	1362	Passenger Seat Belt Switch Signal	I	—
46 - 52	—	—	—	Not Occupied	—	—
53	0.5	OG / GY	5021	Right Front Roof Rail Air Bag High Control	I	—
54	0.5	WH / OG	5022	Right Front Roof Rail Air Bag Low Control	I	—

K38A Chassis Control Module - Auxiliary (L5P+N2N)



3240110

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 15498534
Service Connector: 19329924
Description: 38-Way F 1.5 CTS, 2.8 MCP, 4.8 MCP Series, Sealed(BK with BK Inner Connector)

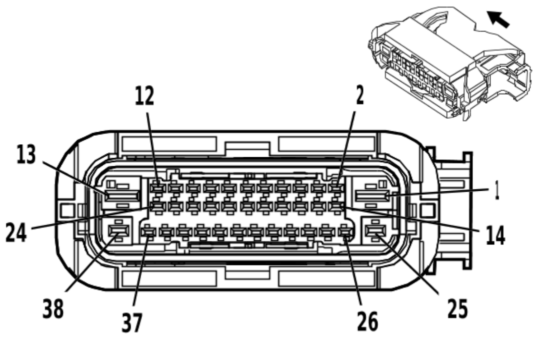
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19368624	J-35616-35 (VT)	J-38125-212
II	19369235	J-35616-14 (GN)	EL-38125-560A
III	85158596	J-35616-40 (BU)	EL-38125-560A

K38A Chassis Control Module - Auxiliary (L5P+N2N)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD / WH	2040	Battery Positive Voltage	III	—
2 - 12	—	—	—	Not Occupied	—	—
13	0.75	BK	1750	Ground	III	—
14	0.5	VT / YE	5985	Accessory Wake-Up Serial Data	II	—
15 - 21	—	—	—	Not Occupied	—	—
22	0.5	YE / BK	2224	Trailer Brake Enable Signal	II	—
23	0.5	WH / BK	2223	Trailer Brake Apply Signal	II	—
24	—	—	—	Not Occupied	—	—
25	0.5	VT / GN	439	Run/Crank Ignition 1 Voltage	I	—
26	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	—
27	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	—
28	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	—
29	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	—
30	0.5	GN / VT	4114	Chassis Control Module LIN Bus 1	II	—
31 - 38	—	—	—	Not Occupied	—	—

K38A Chassis Control Module - Auxiliary (-N2N)



3277907

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 13962189
Service Connector: 19119894
Description: 38-Way F 1.5, 2.8, 4.8 MCP Series, Sealed(BK)

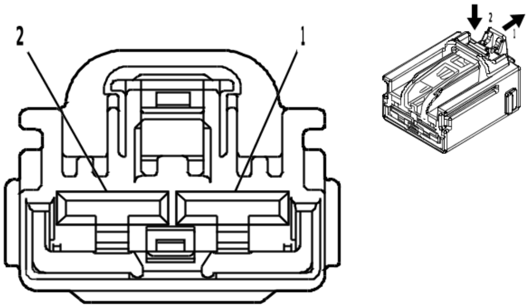
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19368624	J-35616-35 (VT)	J-38125-212
II	19369235	J-35616-14 (GN)	EL-38125-560A
III	85158596	J-35616-40 (BU)	EL-38125-560A

K38A Chassis Control Module - Auxiliary (-N2N)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD / WH	2040	Battery Positive Voltage	III	—
2 - 12	—	—	—	Not Occupied	—	—
13	0.75	BK	1750	Ground	III	—
14	0.5	VT / YE	5985	Accessory Wake-Up Serial Data	II	—
15 - 21	—	—	—	Not Occupied	—	—
22	0.5	YE / BK	2224	Trailer Brake Enable Signal	II	—
23	0.5	WH / BK	2223	Trailer Brake Apply Signal	II	—
24	—	—	—	Not Occupied	—	—
25	0.5	VT / GN	439	Run/Crank Ignition 1 Voltage	I	—
26	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	—
27	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	—
28	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	—
29	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	—
30	0.5	GN / VT	4114	Chassis Control Module LIN Bus 1	II	—
31 - 38	—	—	—	Not Occupied	—	—

K40 Seat Memory Control Module X1



5116029

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 7289-7782-40
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 6.3 Series(GY)

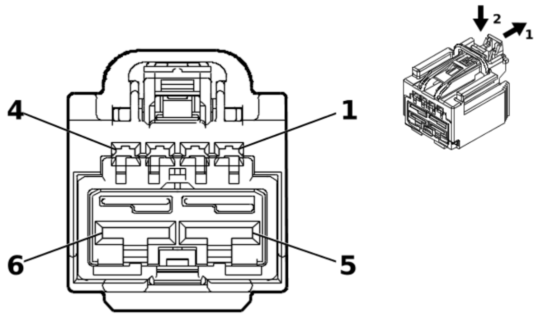
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-42 (RD)	No Tool Required

K40 Seat Memory Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD / BN	1140	Battery Positive Voltage	I	—
2	2.5	RD / YE	5040	Battery Positive Voltage	I	—

K40 Seat Memory Control Module X2



5355899

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 7289-9870-30
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 1.5, 6.3 YESC Series(BK)

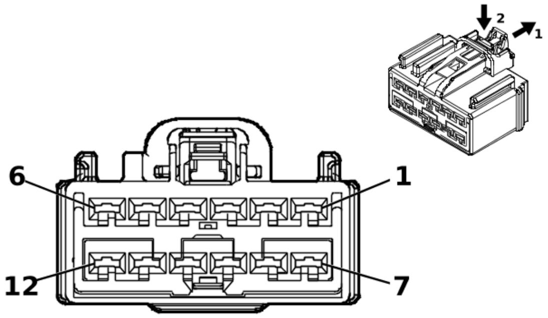
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-42 (RD)	No Tool Required

K40 Seat Memory Control Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN	5060	Low Speed GMLAN Serial Data	I	—
2	—	—	—	Not Occupied	—	—
3	0.5	GN / WH	7530	Driver Seat Adjuster Memory Module LIN Bus 1	I	—
4	—	—	—	Not Occupied	—	—
5	2.5	BK	1150	Ground	II	—
6	—	—	—	Not Occupied	—	—

K40 Seat Memory Control Module X3



5254826

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 7289-9152-40
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 2.8 Kaizen Series(L-GY)

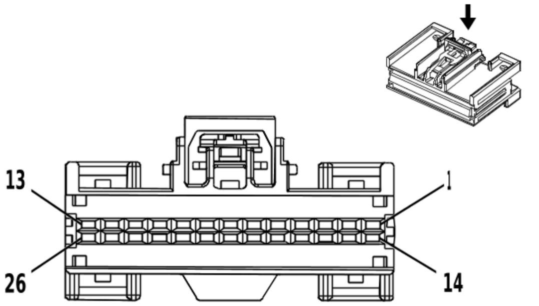
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required

K40 Seat Memory Control Module X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN / YE	276	Driver Seat Recline Motor Forward Control	I	—
2	1.5	BU / YE	277	Driver Seat Recline Motor Rearward Control	I	—
3	1.5	GN / BN	286	Driver Seat Front Vertical Motor Up Control	I	—
4	1.5	BU / VT	287	Driver Seat Front Vertical Motor Down Control	I	—
5	1.5	YE	282	Driver Seat Rear Vertical Motor Up Control	I	—
6	1.5	GY / BU	283	Driver Seat Rear Vertical Motor Down Control	I	—
7 - 10	—	—	—	Not Occupied	—	—
11	1.5	YE / BU	285	Driver Seat Horizontal Motor Forward Control	I	—
12	1.5	GY / GN	284	Driver Seat Horizontal Motor Rearward Control	I	—

K40 Seat Memory Control Module X5



2916473

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 7287-2043-30
Service Connector: Service by Harness - See Part Catalog
Description: 26-Way F 0.64 Series(BK)

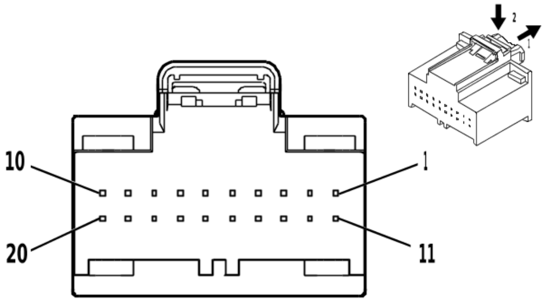
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

K40 Seat Memory Control Module X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH / RD	3298	Seat Position Sensors High Reference 2	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.5	BN	3038	Driver Seat Right Rear Haptic Movement Motor Control	I	—
5	0.5	YE / BN	3037	Driver Seat Left Rear Haptic Movement Motor Control	I	—
6	—	—	—	Not Occupied	—	—
7	0.5	YE / BN	1522	Seat Horizontal Forward Switch Signal	I	—
8	0.5	GY / GN	1523	Seat Horizontal Rearward Switch Signal	I	—
9	0.5	GN / BN	1518	Seat Front Vertical Up Switch Signal	I	—
10	0.5	BU / VT	1520	Seat Front Vertical Down Switch Signal	I	—
11	0.5	GN	569	Seat Horizontal Motor Position Sensor Signal	I	—
12	0.5	BN / WH	557	Seat Front Vertical Motor Position Sensor Signal	I	—
13 - 18	—	—	—	Not Occupied	—	—
19	0.5	YE	1519	Seat Rear Vertical Up Switch Signal	I	—
20	0.5	YE / BU	1521	Seat Rear Vertical Down Switch Signal	I	—
21	0.5	GY / BK	1269	Seat Recline Forward Switch Signal	I	—
22	0.5	GN / GY	1270	Seat Recline Rearward Switch Signal	I	—
23 - 24	—	—	—	Not Occupied	—	—
25	0.5	YE / BU	568	Seat Rear Vertical Motor Position Sensor Signal	I	—
26	0.5	WH / BK	570	Driver Seat Recline Motor Position Sensor Signal	I	—

K40 Seat Memory Control Module X6



5109537

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 31410-0206
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 0.64 Series(GY)

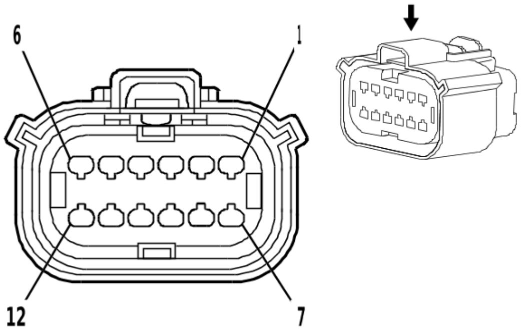
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

K40 Seat Memory Control Module X6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 10	—	—	—	Not Occupied	—	—
11	0.5	BK / BU	5978	Memory Switch Low Reference	I	—
12	0.5	WH	615	Seat Memory Switch Signal 1	I	—
13 - 14	—	—	—	Not Occupied	—	—
15	0.5	BU / GN	614	Seat Memory Switch Set Signal	I	—
16 - 20	—	—	—	Not Occupied	—	—

K43 Power Steering Control Module X1 (NV8)



1825165

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 13595088
Service Connector: 19352907
Description: 12-Way F 1.5 MX Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19368973	J-35616-2A (GY)	J-38125-217

K43 Power Steering Control Module X1 (NV8)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	I	—
2	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	I	—
3	0.5	BU / YE	6105	High Speed GMLAN Serial Data [+] 2	I	—
4	0.5	WH	6106	High Speed GMLAN Serial Data [-] 2	I	—
5	0.5	RD / WH	5740	Battery Positive Voltage	I	—
6	—	—	—	Not Occupied	—	—
7	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	I	—
8	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	I	—
9	0.5	BU / YE	6105	High Speed GMLAN Serial Data [+] 2	I	—
10	0.5	WH	6106	High Speed GMLAN Serial Data [-] 2	I	—
11	0.75 1	BK / WH BK / WH	1651 1651	Signal Ground Signal Ground	I I	L5P L8T
12	0.5	WH / BU	5986	Serial Data Communication Enable	I	—

K43 Power Steering Control Module X3 (NV8)

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Connector Part Information

Harness Type: Power Steering Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

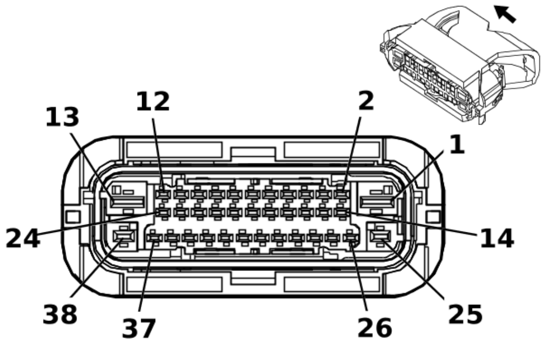
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K43 Power Steering Control Module X3 (NV8)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK	—	—	I	—
2	—	BK	—	—	I	—

K44 Power Take-Off Control Module X1 (PTO)



5199902

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 35503406
Service Connector: 19329924
Description: 38-Way F 1.5, 2.8, 4.8 MCP Series, Sealed(BK with BK Inner Connector)

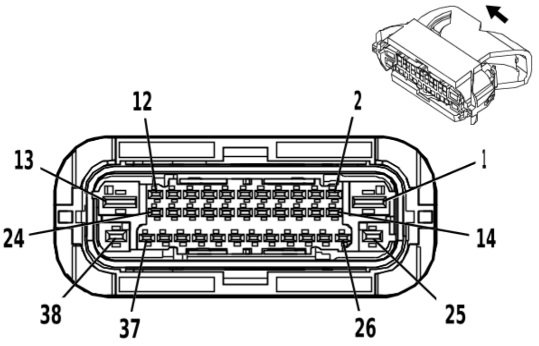
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19368624	J-35616-35 (VT)	J-38125-212
II	19369235	J-35616-14 (GN)	EL-38125-560A
III	85158596	J-35616-40 (BU)	EL-38125-560A

K44 Power Take-Off Control Module X1 (PTO)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD / BU	4540	Battery Positive Voltage	III	—
2 - 12	—	—	—	Not Occupied	—	—
13	1.5	BK / WH	451	Signal Ground	III	—
14	0.5	WH / BU	5986	Serial Data Communication Enable	II	—
15	0.75	GN / WH	488	Power Take-Off Control Switch Signal	II	—
16 - 17	—	—	—	Not Occupied	—	—
18	0.5	BN / GN	4311	Power Take-Off Enable Cabin Switch Normally Closed Signal	II	—
19 - 24	—	—	—	Not Occupied	—	—
25	0.75	GY / GN	6239	Transmission Power Take-Off Engage/Disengage Signal Power	I	—
26	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	—
27	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	—
28	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	—
29	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	—
30 - 38	—	—	—	Not Occupied	—	—

K44 Power Take-Off Control Module X2 (PTO)



5141918

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 35497871
Service Connector: 86825459
Description: 38-Way F 1.5, 2.8, 4.8 MCP Series, Sealed(BK with BN Inner Connector)

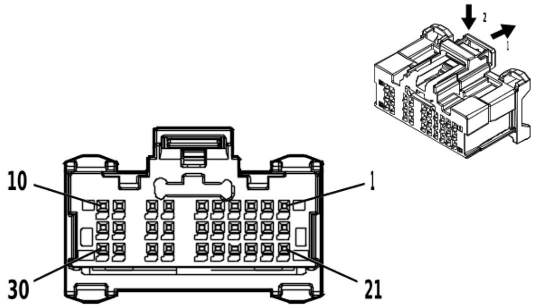
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19369235	J-35616-14 (GN)	EL-38125-560A
II	85158596	J-35616-40 (BU)	EL-38125-560A

K44 Power Take-Off Control Module X2 (PTO)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 7	—	—	—	Not Occupied	—	—
8	0.5	WH / BK	8238	Power Take Off Upfitter Interlock Switch Signal 2	I	—
9	0.5	GN / WH	8236	Power Take Off Solenoid Control Low	I	—
10	0.5	GN / WH	8236	Power Take Off Solenoid Control Low	I	—
11 - 12	—	—	—	Not Occupied	—	—
13	0.5	BU / WH	8235	Power Take Off Solenoid Control High	II	—
14 - 16	—	—	—	Not Occupied	—	—
17	0.5	BN / WH	8234	Power Take Off Pressure Sensor Signal	I	—
18	0.5	YE	8233	Power Take Off Pressure Sensor Low Reference	I	—
19	0.5	WH	8232	Power Take Off Pressure Sensor 5 Volt Reference	I	—
20 - 27	—	—	—	Not Occupied	—	—
28	0.5	WH / GN	6142	Power Take-Off Engine Shutdown Signal	I	—
29 - 34	—	—	—	Not Occupied	—	—
35	0.5	VT / GN	4308	Power Take-Off Remote Throttle Signal	I	—
36	0.75	BU / BN	4408	Power Take-Off Enable Signal	I	—
37 - 38	—	—	—	Not Occupied	—	—

K56 Serial Data Gateway Module X1



4900333

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35077574
Service Connector: 13519319
Description: 30-Way F 0.5 MQS Series(BK with D-GY Front Housing)

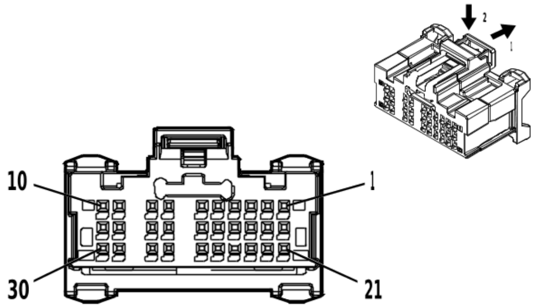
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19370262	EL-35616-58 (BK)	EL-38125-58

K56 Serial Data Gateway Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD / VT	3340	Battery Positive Voltage	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.35	BU / GY	3935	High Speed GMLAN Serial Data [+] 8	I	—
5	0.35	WH / GY	3936	High Speed GMLAN Serial Data [-] 8	I	—
6	—	—	—	Not Occupied	—	—
7	0.35	BK / WH	1851	Signal Ground	I	—
8	0.35	BU / GN	1304	High Speed GMLAN Serial Data [+] 9	I	—
9	0.35	WH / GN	1305	High Speed GMLAN Serial Data [-] 9	I	—
10 - 12	—	—	—	Not Occupied	—	—
13	0.35	BU / WH	2089	High Speed GMLAN Serial Data [+] 13	I	—
14	0.35	WH	2090	High Speed GMLAN Serial Data [-] 13	I	—
15	0.35	BU / BK	1978	High Speed GMLAN Serial Data [+] 11	I	—
16	0.35	WH	1979	High Speed GMLAN Serial Data [-] 11	I	—
17	0.35	BU / BN	1980	High Speed GMLAN Serial Data [+] 12	I	—
18	0.35	WH	1981	High Speed GMLAN Serial Data [-] 12	I	—
19	—	—	—	Not Occupied	—	—
20	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
21 - 25	—	—	—	Not Occupied	—	—
26	0.35	GN / WH	2100	Low Speed GMLAN Serial Data 3	I	—
27 - 29	—	—	—	Not Occupied	—	—
30	0.35	GY / GN	1102	Low Speed GMLAN Serial Data 2	I	—

K56 Serial Data Gateway Module X2



4897967

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35074169
Service Connector: 13519320
Description: 30-Way F 0.5 MQS Series(BK with BU Front Housing)

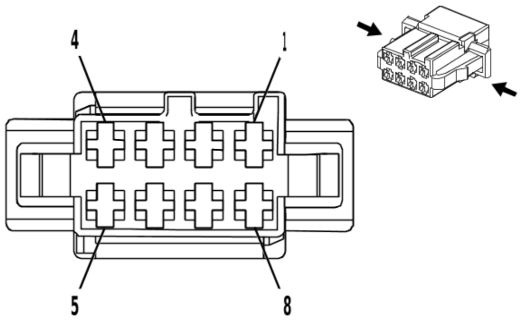
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19370262	EL-35616-58 (BK)	EL-38125-58

K56 Serial Data Gateway Module X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.35	BU / WH	2500	High Speed GMLAN Serial Data [+] 1	I	—
5	0.35	WH / BU	2501	High Speed GMLAN Serial Data [-] 1	I	—
6	0.35	BU / OG	3935	High Speed GMLAN Serial Data [+] 8	I	—
7	0.35	WH / BU	3936	High Speed GMLAN Serial Data [-] 8	I	—
8	0.35	BU / BK	6105	High Speed GMLAN Serial Data [+] 2	I	—
9	0.35	GY	6106	High Speed GMLAN Serial Data [-] 2	I	—
10	0.35	BU / GN	1304	High Speed GMLAN Serial Data [+] 9	I	—
11 - 13	—	—	—	Not Occupied	—	—
14	0.35	BU	2500	High Speed GMLAN Serial Data [+] 1	I	—
15	0.35	WH	2501	High Speed GMLAN Serial Data [-] 1	I	—
16	0.35	BU / GY	3935	High Speed GMLAN Serial Data [+] 8	I	—
17	0.35	WH / GY	3936	High Speed GMLAN Serial Data [-] 8	I	—
18	0.35	BU / YE	6105	High Speed GMLAN Serial Data [+] 2	I	—
19	0.35	WH	6106	High Speed GMLAN Serial Data [-] 2	I	—
20	0.35	WH / GN	1305	High Speed GMLAN Serial Data [-] 9	I	—
21 - 22	—	—	—	Not Occupied	—	—
23	0.35	VT / BK	1639	Run/Crank Ignition 1 Voltage	I	—
24	—	—	—	Not Occupied	—	—
25	0.35	WH / BU	5986	Serial Data Communication Enable	I	—
26 - 30	—	—	—	Not Occupied	—	—

K60 Steering Column Lock Module (BTM)



2173871

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 10718780
Service Connector: 13576545
Description: 8-Way F 1.6 Micro-Timer Series(BK)

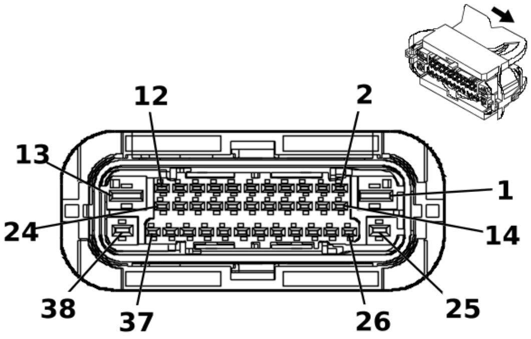
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

K60 Steering Column Lock Module (BTM)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.35	BU / VT	5904	Steering Column Lock Status Signal	I	—
3	0.35	BU / VT	807	Ignition Off/Accessory Ignition Voltage	I	—
4	0.35	GN / VT	1601	Steering Column Lock Signal	I	—
5	0.5	RD / GY	4140	Battery Positive Voltage	I	—
6	0.35	BK	1850	Ground	I	—
7	0.35	BK / WH	1851	Signal Ground	I	—
8	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—

K68 Trailer Lighting Control Module (U1D)



5199340

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33235465
Service Connector: 84769286
Description: 38-Way F 1.5, 2.8, 4.8 MCP Series, Sealed(BK with BN Inner Connector)

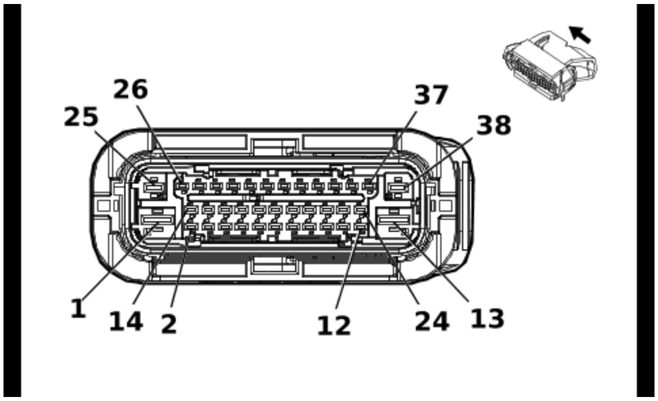
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19368624	J-35616-35 (VT)	J-38125-212
II	19369235	J-35616-14 (GN)	EL-38125-560A
III	85158596	J-35616-40 (BU)	EL-38125-560A

K68 Trailer Lighting Control Module (U1D)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	RD / YE	5840	Battery Positive Voltage	III	—
2	0.75	YE / BU	1618	Left Rear Trailer Stop/Turn Lamp Control	II	—
3	0.75	GN / VT	1619	Right Rear Trailer Stop/Turn Lamp Control	II	—
4 - 6	—	—	—	Not Occupied	—	—
7	0.75	WH / GN	5189	Trailer Backup Lamp Control	II	—
8 - 9	—	—	—	Not Occupied	—	—
10	0.5	VT / GN	439	Run/Crank Ignition 1 Voltage	II	—
11	0.5	VT / WH	5065	Stop Lamp Relay Coil Control	II	—
12	—	—	—	Not Occupied	—	—
13	2.5	BK	1750	Ground	III	—
14 - 24	—	—	—	Not Occupied	—	—
25	0.75	GY / BN	2109	Trailer Park Lamp Control	I	—
26	—	—	—	Not Occupied	—	—
27	0.5	GN	5060	Low Speed GMLAN Serial Data	II	—
28 - 37	—	—	—	Not Occupied	—	—
38	2	RD / VT	5640	Battery Positive Voltage	I	—

K69 Transfer Case Control Module (NQF/NQH)



3240112

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 35503407
Service Connector: 85564866
Description: 38-Way F 1.5 CTS, 2.8 MCP, 4.8 MCP Series, Sealed(BK with BU Inner Connector)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19368624	J-35616-35 (VT)	J-38125-212
II	19369235	J-35616-14 (GN)	EL-38125-560A
III	85158596	J-35616-40 (BU)	EL-38125-560A
IV	Not Available	J-35616-35 (VT)	J-38125-212

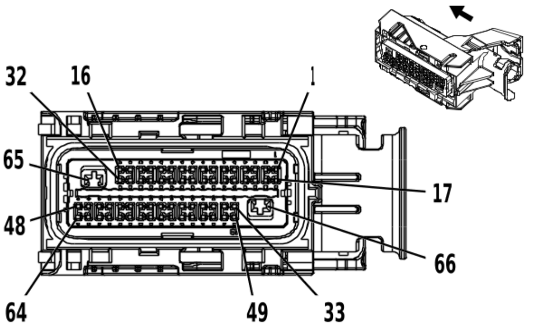
K69 Transfer Case Control Module (NQF/NQH)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	3	RD / GY	1342	Battery Positive Voltage	III	—
2	—	—	—	Not Occupied	—	—
3	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	—
4	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	—
5	0.5	WH / GN	7479	Rotary Position Sensor Signal	II	—
6	—	—	—	Not Occupied	—	—
7	0.5	YE	7474	Incremental Encoder Direction Signal	II	—
8	—	—	—	Not Occupied	—	—
9	0.5	YE / WH	1695	4WD Locked Range Indicator Control	II	—
10	0.5	BN	1560	Neutral Indicator Control	II	—
11	—	—	—	Not Occupied	—	—
12	0.5	GY / BK	1570	Front Axle Actuator Control	II	—
13	4	YE / VT	1553	Transfer Case Motor Counter Clockwise Control	III	—
14	—	—	—	Not Occupied	—	—
15	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	—
16	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	—
17	—	—	—	Not Occupied	—	—
18	0.5	WH / BU	5986	Serial Data Communication Enable	II	—
19	0.5	BU / GY	7473	Incremental Encoder Impulse Signal	II	—

K69 Transfer Case Control Module (NQF/NQH) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
20	0.5	WH / RD	7477	Gear Position Sensor 5V Reference	II	—
21 - 23	—	—	—	Not Occupied	—	—
24	0.5	GN	953	—	II	—
25	3 2.5	BK BK	4450 4450	Ground Ground	IV I	L5P L8T
26	—	—	—	Not Occupied	—	—
27	0.5	GN	951	—	II	—
28 - 29	—	—	—	Not Occupied	—	—
30	0.5	YE / BK	7478	Gear Position Sensor Low Reference	II	—
31	0.5	WH / GN	7475	Incremental Encoder Sensor Voltage Reference	II	—
32	—	—	—	Not Occupied	—	—
33	0.75	BK	952	—	II	—
34	0.75	YE / BN	1569	Transfer Case Lock Solenoid Valve Control	II	—
35	—	—	—	Not Occupied	—	—
36	0.5	VT	7476	Incremental Encoder Sensor Low Reference	II	—
37	—	—	—	Not Occupied	—	—
38	2.5	YE / GY	1552	Transfer Case Motor Clockwise Control	I	—

K71 Transmission Control Module (MGM/MGU)



3621452

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 35353856
Service Connector: 19329822
Description: 66-Way F 0.64, 2.8 Series, Sealed(BK with BK Terminal Position Assurance)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13587518	J-35616-35 (VT)	J-38125-11A
II	19351723	J-35616-64B (L-BU)	J-38125-213
III	Not required	No Tool Required	No Tool Required

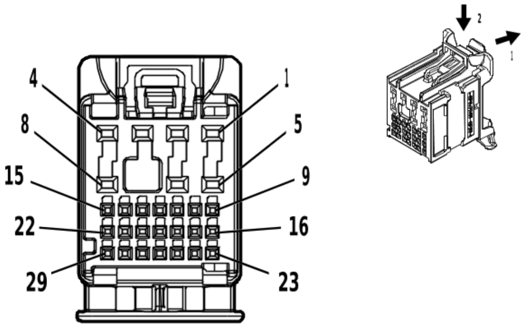
K71 Transmission Control Module (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT / WH	422	Torque Converter Clutch Solenoid Valve Control	II	—
2	0.5	GY / GN	6403	Clutch Solenoid Valve D Control	II	—
3	0.5	WH / BU	4507	Transmission Clutch H Control	II	—
4	0.5	WH	4508	Transmission Clutch G Control	II	—
5 - 6	—	—	—	Not Occupied	—	—
7	0.5	YE / GN	4170	Transmission Output Shaft Speed Sensor Circuit 9V Reference	II	—
8	0.5	YE / BU	4171	Transmission Input Shaft Speed Sensor Circuit 9V Reference	II	—
9	—	VT / YE	5985	Accessory Wake-Up Serial Data	III	—
10 - 11	—	—	—	Not Occupied	—	—
12	0.5	GN / YE	6353	Input Speed Signal	II	—
13	0.5	GN / VT	4510	Transmission Intermediate Speed Signal	II	—
14	0.5	GY / BU	6358	Output Speed Signal	II	—
15	0.5	BN / WH	6254	Transmission Input Speed Sensor Signal	II	—
16	—	—	—	Not Occupied	—	—
17	0.5	GN / WH	1530	Transmission Line Pressure Control Solenoid Valve Control	II	—
18	0.5	YE / BN	6404	Clutch Solenoid Valve E Control	II	—
19	0.5	GY	6402	Clutch Solenoid Valve C Control	II	—
20	0.5	VT	4509	Transmission Clutch F Control	II	—

K71 Transmission Control Module (MGM/MGU) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
21	—	—	—	Not Occupied	—	—
22	0.5	GN / BK	7819	Default Disable Solenoid Control	II	—
23	—	—	—	Not Occupied	—	—
24	0.5	GN / WH	2968	Transmission Auxiliary Fluid Pump Control	II	—
25 - 27	—	—	—	Not Occupied	—	—
28	0.5	BK / BN	586	Transmission Fluid Temperature Sensor Low Reference	II	—
29 - 32	—	—	—	Not Occupied	—	—
33	0.5	GN / GY	6387	Transmission High Side Driver 1 Control	II	—
34	—	—	—	Not Occupied	—	—
35	0.5	VT / BK	2139	Run/Crank Ignition 1 Voltage	II	—
36	—	—	—	Not Occupied	—	—
37	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	—
38	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	—
39 - 48	—	—	—	Not Occupied	—	—
49	0.5	GY / BN	6388	Transmission High Side Driver 2 Control	II	—
50	—	—	—	Not Occupied	—	—
51	0.5	VT / YE	5985	Accessory Wake-Up Serial Data	II	—
52	—	—	—	Not Occupied	—	—
53	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	II	—
54	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	II	—
55 - 62	—	—	—	Not Occupied	—	—
63	0.5	BN / WH	585	Transmission Fluid Temperature Sensor Signal	II	—
64	0.5	GN / YE	5724	Ignition Mode Switch Mode Control	II	—
65	1.5	BK / WH	451	Signal Ground	I	—
66	1.5	RD / GN	1840	Battery Positive Voltage	I	—

K73 Telematics Communication Interface Control Module X1



4496253

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35364134
Service Connector: 13534974
Description: 29-Way F 0.5 NANO, 1.2 MCON, stAK50h Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19370262	EL-35616-58 (BK)	EL-38125-58
II	84729890	J-35616-12 (BU)	J-38125-215A

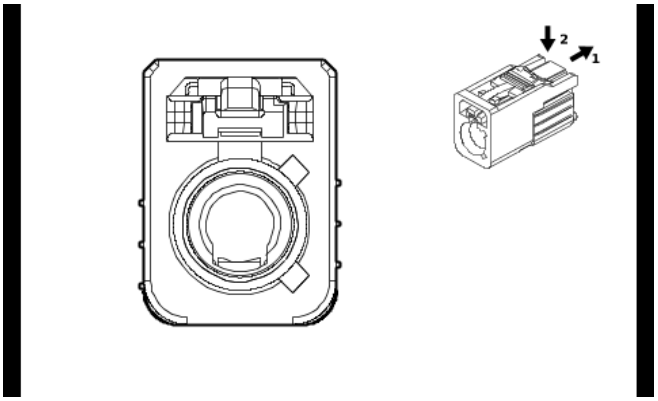
K73 Telematics Communication Interface Control Module X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD / BU	3240	Battery Positive Voltage	II	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.5	BK / WH	2751	Signal Ground	II	—
5	—	—	—	Not Occupied	—	—
6	0.35	GN / BK	2515	Telematics Switch Supply Voltage	II	—
7	—	—	—	Not Occupied	—	—
8	0.5	BK / WH	2751	Signal Ground	II	—
9	0.35	WH / GN	1305	High Speed GMLAN Serial Data [-] 9	I	—
10	0.35	BU / GN	1304	High Speed GMLAN Serial Data [+] 9	I	—
11	0.35	GN / WH	2514	Telematics Switch Signal	I	—
12	0.35	WH / BU	5986	Serial Data Communication Enable	I	—
13	0.35	Bare	1792	Low Reference	I	—
14	0.35	BK / GY	5152	Voice Recognition Audio [-] Control	I	—
15	0.35	GY / YE	5149	Voice Recognition Audio Signal	I	—
16	0.35	WH / GN	1305	High Speed GMLAN Serial Data [-] 9	I	—
17	0.35	BU / GN	1304	High Speed GMLAN Serial Data [+] 9	I	—
18	—	—	—	Not Occupied	—	—
19	0.35	YE / VT	2516	Telematics Switch Green LED Indicator Control	I	—
20	0.35	Bare	1782	Low Reference	I	—
21	0.35	BK / BN	654	Cellular Telephone Microphone Low Reference	I	—
22	0.35	BU	655	Cellular Telephone Microphone Signal	I	—

K73 Telematics Communication Interface Control Module X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
23	0.35	GY / GN	1102	Low Speed GMLAN Serial Data 2	I	—
24 - 25	—	—	—	Not Occupied	—	—
26	0.35	BN / WH	2517	Telematics Switch Red LED Indicator Control	I	—
27	—	—	—	Not Occupied	—	—
28	0.35	GY / WH	7211	Ethernet Bus 4 [+]	I	—
29	0.35	GY	7210	Ethernet Bus 4 [-]	I	—

K73 Telematics Communication Interface Control Module X5



5630760

Connector Part Information

Harness Type: Instrument Panel Wiring Harness COAX
OEM Connector: 33340312
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Coax Type(VT)

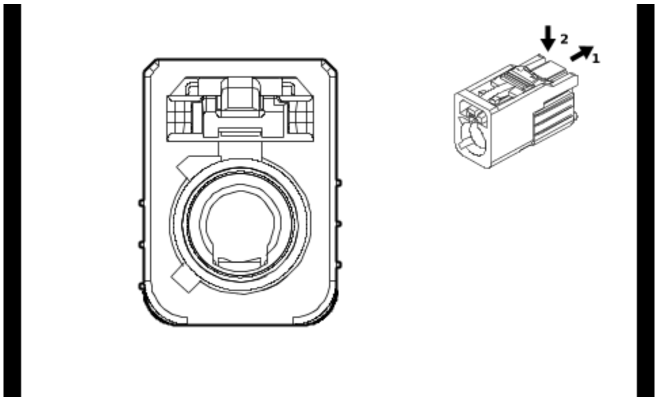
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K73 Telematics Communication Interface Control Module X5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	Coax Cable	—	(Cell only) Coaxial Antenna Cell Phone Signal	I	—

K73 Telematics Communication Interface Control Module X7



5630785

Connector Part Information

Harness Type: Instrument Panel Wiring Harness COAX
OEM Connector: 33340314
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Coax Type(BN)

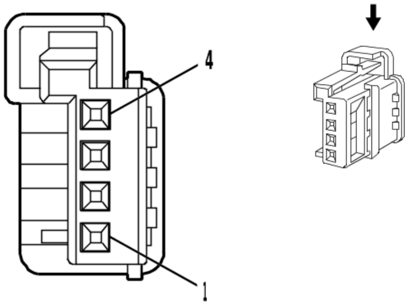
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K73 Telematics Communication Interface Control Module X7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	Coax Cable	—	(GPS/Cell) Coaxial Antenna Cell/GPS combined Signal	I	—

K77 Remote Control Door Lock Receiver (AQQ)



2179793

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 10768790
Service Connector: 84724190
Description: 4-Way F 0.64 Micro-Quadlock Series(BK)

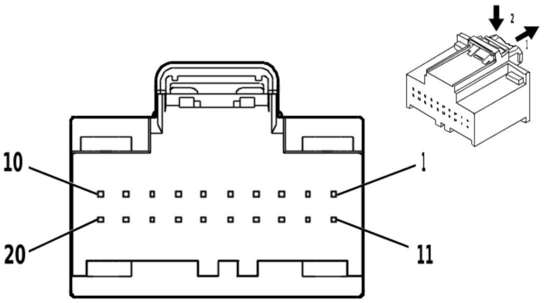
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

K77 Remote Control Door Lock Receiver (AQQ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY	3273	Remote Control Door Lock Receiver Low Reference	I	—
2	0.35	YE / GN	3274	Remote Control Door Lock Receiver Transmit Signal	I	—
3	0.35	BU / WH	3275	Remote Control Door Lock Receiver Receive Signal	I	—
4	0.35	GY / WH	3272	Remote Control Door Lock Receiver Control	I	—

K84 Keyless Entry Control Module X1 (BTM)



5109514

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35162720
Service Connector: 13525992
Description: 20-Way F 0.64 Series(BN)

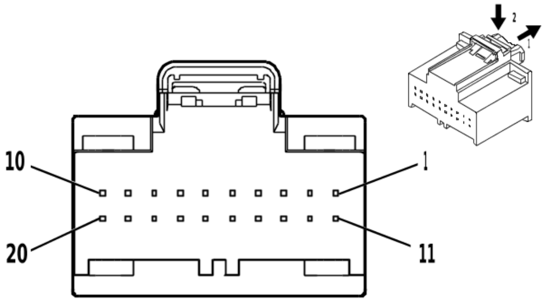
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13584547	J-35616-64B (L-BU)	J-38125-215A

K84 Keyless Entry Control Module X1 (BTM)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN / VT	1601	Steering Column Lock Signal	I	—
2	0.5	RD / YE	4340	Battery Positive Voltage	I	—
3	0.5	GN	5060	Low Speed GMLAN Serial Data	I	—
4	—	—	—	Not Occupied	—	—
5	0.35	VT / YE	4	Accessory Ignition Voltage	I	—
6	—	—	—	Not Occupied	—	—
7	0.35	GY / GN	4083	Retained Accessory Power Relay 2 Coil Control	I	—
8	—	—	—	Not Occupied	—	—
9	0.35	WH / YE	3574	Driver Door Open Switch Signal	I	—
10	0.35	YE / BU	4086	Ignition Mode Switch Challenge Active Signal	I	—
11	0.35	GN / BK	3558	Passive Start Switch Signal 2	I	—
12	0.35	BK / GY	3559	Passive Start Switch 2 Low Reference	I	—
13	0.35	VT / BK	3	Run/Crank Ignition 1 Voltage	I	—
14	0.5	BK / WH	1151	Signal Ground	I	—
15	0.35	GY / BK	3555	Interior Passive Entry Antenna 2 Low Signal	I	—
16	0.35	BN / BK	3552	Interior Passive Entry Antenna 1 High Signal	I	—
17	0.35	WH	3553	Interior Passive Entry Antenna 1 Low Signal	I	—
18 - 19	—	—	—	Not Occupied	—	—
20	0.35	BU	3554	Interior Passive Entry Antenna 2 High Signal	I	—

K84 Keyless Entry Control Module X2 (BTM)



5109537

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35165309
Service Connector: 13525991
Description: 20-Way F 0.64 Series(GY)

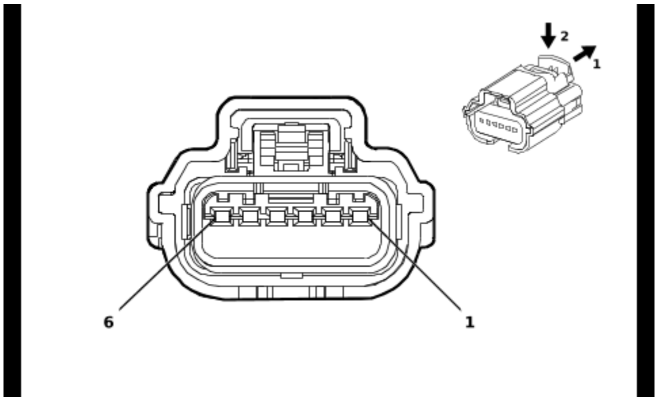
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13584547	J-35616-64B (L-BU)	J-38125-215A

K84 Keyless Entry Control Module X2 (BTM)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE / GY	6158	Right Rear Door Handle Switch Signal	I	—
2	0.35	BN / YE	6157	Left Rear Door Handle Switch Signal	I	—
3 - 5	—	—	—	Not Occupied	—	—
6	0.5	VT	3560	Driver Door Passive Entry Antenna High Signal	I	—
7	0.5	VT / GY	3561	Driver Door Passive Entry Antenna Low Signal	I	—
8	—	—	—	Not Occupied	—	—
9	0.5	GN / BK	3563	Passenger Door Passive Entry Antenna Low Signal	I	—
10	—	—	—	Not Occupied	—	—
11	0.35	VT / WH	3571	Passenger Door Handle Switch Signal	I	—
12	0.35	GN / WH	3570	Driver Door Handle Switch Signal	I	—
13 - 15	—	—	—	Not Occupied	—	—
16	0.5	BN / GN	3568	Rear Closure Passive Entry Antenna High Signal	I	—
17	—	—	—	Not Occupied	—	—
18	0.5	GN / GY	3569	Rear Closure Passive Entry Antenna Low Signal	I	—
19	—	—	—	Not Occupied	—	—
20	0.5	GN / YE	3562	Passenger Door Passive Entry Antenna High Signal	I	—

K85 Passenger Presence Module



5157678

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 31404-7132
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 64 Series, Sealed(BK)

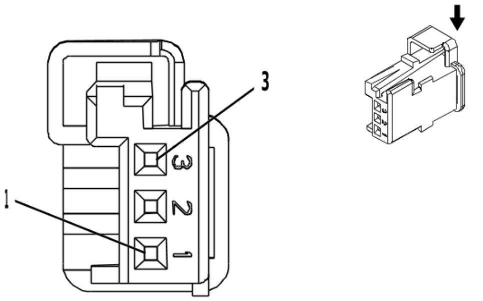
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

K85 Passenger Presence Module

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD / GN	4440	Battery Positive Voltage	I	—
2	0.5	GN	5060	Low Speed GMLAN Serial Data	I	—
3	—	—	—	Not Occupied	—	—
4	0.5	BK / WH	2551	Signal Ground	I	—
5	0.5	GY / OG	3946	Passenger Automatic Locking Retractor Switch Low Reference	I	—
6	0.5	OG / BN	3947	Passenger Automatic Locking Retractor Switch Signal	I	—

K89 Immobilizer Control Module (-BTM)



4218883

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 10763117
Service Connector: 85587407
Description: 3-Way F 0.64 Micro-Quadlock Series(BK)

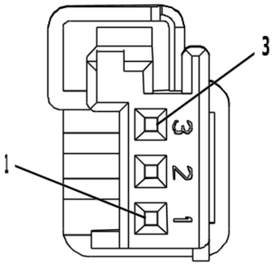
Terminal Part Information

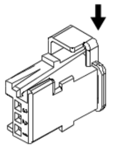
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

K89 Immobilizer Control Module (-BTM)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN / GY	3277	Vehicle Anti-Theft System Immobilizer Low Reference	I	—
2	0.5	GN / VT	7533	Immobilizer LIN Bus 1	I	—
3	0.5	GY / BK	3276	Immobilizer Control Module Control	I	—

K89 Immobilizer Control Module (BTM+D07)





4218883

Connector Part Information

Harness Type: Front Floor Console Wiring Harness
OEM Connector: 10763117
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 0.64 Micro-Quadlock Series(BK)

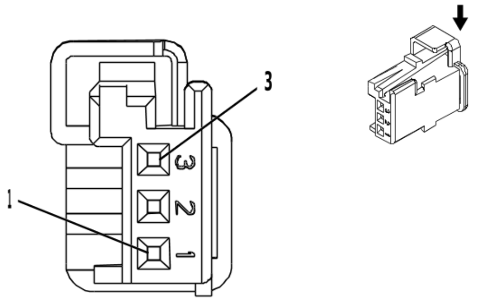
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

K89 Immobilizer Control Module (BTM+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN / GY	3277	Vehicle Anti-Theft System Immobilizer Low Reference	I	—
2	0.35	GN / VT	7533	Immobilizer LIN Bus 1	I	—
3	0.5	GY / BK	3276	Immobilizer Control Module Control	I	—

K89 Immobilizer Control Module (BTM-D07)



4218883

Connector Part Information

Harness Type: Front Floor Console Wiring Harness
OEM Connector: 953697-1
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 0.64 Micro-Quadlock Series(BK)

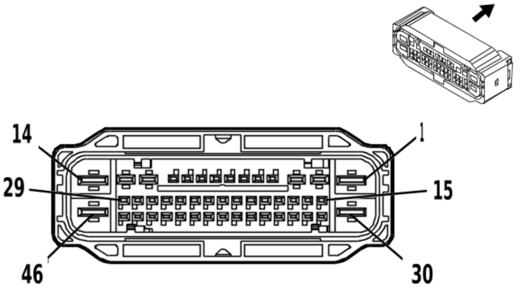
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

K89 Immobilizer Control Module (BTM-D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN / GY	3277	Vehicle Anti-Theft System Immobilizer Low Reference	I	—
2	0.35	GN / VT	7533	Immobilizer LIN Bus 1	I	—
3	0.35	GY / BK	3276	Immobilizer Control Module Control	I	—

K111 Fuel Pump Driver Control Module ((L5P/L8T)-N2N)



4162046

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33222138
Service Connector: 19333026
Description: 46-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575368	J-35616-35 (VT)	J-38125-36
II	19370818	J-35616-12 (BU)	J-38125-215A
III	84634921	J-35616-42 (RD)	J-38125-212

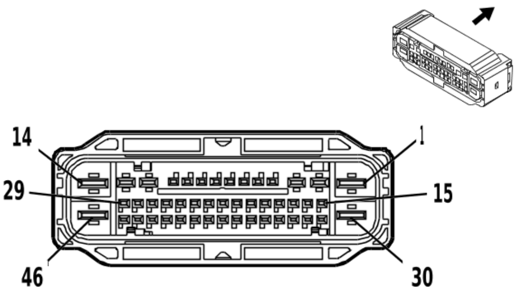
K111 Fuel Pump Driver Control Module ((L5P/L8T)-N2N)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	WH / BN	4138	Fuel Pump Supply Voltage Phase 3	III	—
2	2.5	GY	120	Fuel Pump Control	I	—
3 - 6	—	—	—	Not Occupied	—	—
7	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	II	—
8	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	II	—
9	—	—	—	Not Occupied	—	—
10	0.5	VT / GN	4320	Powertrain Sensor Bus Enable	II	—
11	0.5	GN / GY	465	Fuel Pump Primary Relay Control	II	—
12 - 13	—	—	—	Not Occupied	—	—
14	2.5	BK	1750	Ground	III	—
15	0.5	BN	7444	Fuel Pump Assembly Shield Ground	II	—
16	0.5	WH	1579	Fuel Temperature/Composition Signal	II	—
17 - 18	—	—	—	Not Occupied	—	—
19	0.5	BN / RD	7445	Fuel Line Pressure Sensor 5V Reference	II	—
20	0.5	BU / WH	7446	Fuel Pressure Sensor Signal	II	—
21	0.5	BK / GN	6281	Fuel Level Sensor Low Reference	II	—
22	—	—	—	Not Occupied	—	—
23	0.5	BK / BN	6284	Fuel Tank Pressure Sensor Low Reference	II	—
24 - 29	—	—	—	Not Occupied	—	—
30	2.5	YE / GY	4137	Fuel Pump Supply Voltage Phase 2	III	—

K111 Fuel Pump Driver Control Module ((L5P/L8T)-N2N) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
31 - 34	—	—	—	Not Occupied	—	—
35	0.5	BK / YE	7447	Fuel Pressure Sensor Low Reference	II	—
36	—	—	—	Not Occupied	—	—
37	0.5	BU / VT	1589	Primary Fuel Level Sensor Signal	II	—
38	—	—	—	Not Occupied	—	—
39	0.5	YE / RD	2709	Fuel Tank Pressure Sensor 5V Reference	II	—
40	0.5	BU / GN	890	Fuel Tank Pressure Sensor Signal	II	—
41 - 42	—	—	—	Not Occupied	—	—
43	0.5	WH	1310	EVAP Vent Solenoid Valve Control	II	—
44 - 45	—	—	—	Not Occupied	—	—
46	2.5	RD / VT	5340	Battery Positive Voltage	III	—

K111 Fuel Pump Driver Control Module (L5P+N2N)



4162046

Connector Part Information

Harness Type: Fuel Pump Power Control Module Wiring Harness
OEM Connector: 33222138
Service Connector: Service by Harness - See Part Catalog
Description: 46-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	J-35616-35 (VT)	No Tool Required
III	Not required	J-35616-40 (BU)	No Tool Required

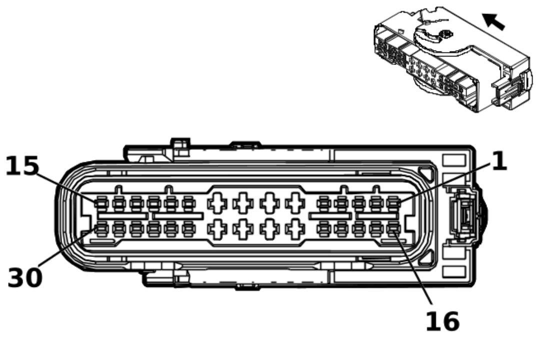
K111 Fuel Pump Driver Control Module (L5P+N2N)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	WH / BN	4138	Fuel Pump Supply Voltage Phase 3	III	—
2	2.5	GY	120	Fuel Pump Control	II	—
3	0.5	VT / GN	439	Run/Crank Ignition 1 Voltage	II	—
4	0.5	WH / RD	6862	Water In Fuel Sensor Voltage Reference	I	—
5	—	—	—	Not Occupied	—	—
6	0.75	YE / BU	1465	Secondary Fuel Pump Relay Control	I	—
7	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	I	—
8	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	VT / GN	4320	Powertrain Sensor Bus Enable	I	—
11	0.5	GN / GY	465	Fuel Pump Primary Relay Control	I	—
12	—	—	—	Not Occupied	—	—
13	1	BU / GN	2120	Secondary Fuel Pump Control	II	—
14	2.5	BK	1750	Ground	III	—
15	0.75	BN	7444	Fuel Pump Assembly Shield Ground	I	—
16	0.5	BU / YE	6861	Water In Fuel Sensor Signal	I	—
17 - 18	—	—	—	Not Occupied	—	—
19	0.5	BN / RD	7445	Fuel Line Pressure Sensor 5V Reference	I	—
20	0.75	BU / WH	7446	Fuel Pressure Sensor Signal	I	—
21	0.5	BK / GN	6281	Fuel Level Sensor Low Reference	I	—

K111 Fuel Pump Driver Control Module (L5P+N2N) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
22	0.5	BK / BU	6282	Fuel Level Sensor 2 Low Reference	I	—
23	0.5	BK / BU	6863	Water In Fuel Sensor Low Reference	I	—
24	0.5	BK / VT	412	Fuel Filter Temperature Sensor Low Reference	I	—
25 - 29	—	—	—	Not Occupied	—	—
30	2.5	YE / GY	4137	Fuel Pump Supply Voltage Phase 2	III	—
31 - 34	—	—	—	Not Occupied	—	—
35	0.5	BK / YE	7447	Fuel Pressure Sensor Low Reference	I	—
36	0.5	BN / VT	455	Fuel Filter Temperature Signal	I	—
37	0.75	BU / VT	1589	Primary Fuel Level Sensor Signal	I	—
38	0.5	BU / WH	1937	Secondary Fuel Level Sensor Signal	I	—
39 - 43	—	—	—	Not Occupied	—	—
44	1	BK / GN	1580	Fuel Pump Low Reference	I	—
45	—	—	—	Not Occupied	—	—
46	2.5	RD / VT	5340	Battery Positive Voltage	III	—

K111 Fuel Pump Driver Control Module (L5P-N2N)



3240109

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 35449315
Service Connector: 85140064
Description: 30-Way F 1.5, 2.8 MCP Series, Sealed(GN)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19329958	J-35616-2A (GY)	J-38125-11A
II	19371214	J-35616-4A (PU)	J-38125-215A

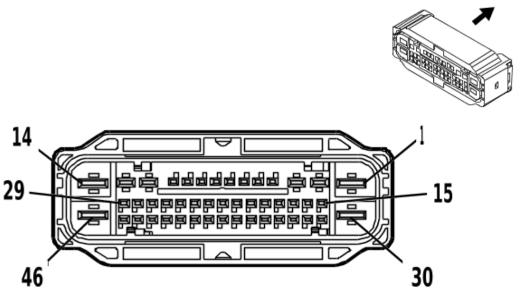
K111 Fuel Pump Driver Control Module (L5P-N2N)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH / RD	6862	Water In Fuel Sensor Voltage Reference	I	—
2	0.5	BU / YE	6861	Water In Fuel Sensor Signal	I	—
3	0.5	BK / BU	6863	Water In Fuel Sensor Low Reference	I	—
4	0.5	BN / VT	455	Fuel Filter Temperature Signal	I	—
5 - 6	—	—	—	Not Occupied	—	—
7	2.5	RD / VT	5340	Battery Positive Voltage	II	—
8	2.5	GY	120	Fuel Pump Control	II	—
9	2.5	YE / GY	4137	Fuel Pump Supply Voltage Phase 2	II	—
10 - 11	—	—	—	Not Occupied	—	—
12	0.5	BN / RD	7445	Fuel Line Pressure Sensor 5V Reference	I	—
13	0.5	BU / VT	1589	Primary Fuel Level Sensor Signal	I	—
14	—	—	—	Not Occupied	—	—
15	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	I	—
16	0.5	VT / GN	4320	Powertrain Sensor Bus Enable	I	—
17	0.5	VT / GN	439	Run/Crank Ignition 1 Voltage	I	—
18	0.5	GN / GY	465	Fuel Pump Primary Relay Control	I	—
19	0.5	BK / VT	412	Fuel Filter Temperature Sensor Low Reference	I	—
20 - 21	—	—	—	Not Occupied	—	—
22	2.5	BK	1750	Ground	II	—
23	0.5	BN	7444	Fuel Pump Assembly Shield Ground	II	—
24	2.5	WH / BN	4138	Fuel Pump Supply Voltage Phase 3	II	—

K111 Fuel Pump Driver Control Module (L5P-N2N) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
25	—	—	—	Not Occupied	—	—
26	0.5	BU / WH	7446	Fuel Pressure Sensor Signal	I	—
27	0.5	BK / YE	7447	Fuel Pressure Sensor Low Reference	I	—
28	0.5	BK / GN	6281	Fuel Level Sensor Low Reference	I	—
29	—	—	—	Not Occupied	—	—
30	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	I	—

K111 Fuel Pump Driver Control Module (L8T+N2N)



4162046

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33222138
Service Connector: 19333026
Description: 46-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575368	J-35616-35 (VT)	J-38125-36
II	19370818	J-35616-12 (BU)	J-38125-215A
III	84634921	J-35616-42 (RD)	J-38125-212

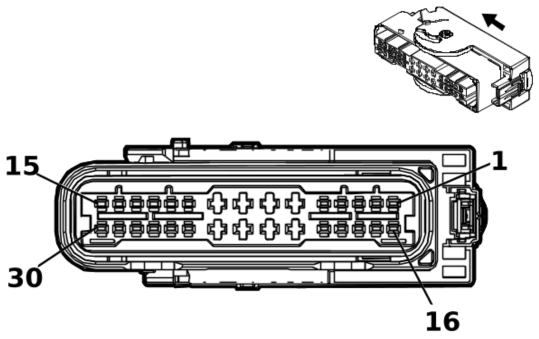
K111 Fuel Pump Driver Control Module (L8T+N2N)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	WH / BN	4138	Fuel Pump Supply Voltage Phase 3	III	—
2	2.5	GY	120	Fuel Pump Control	I	—
3	0.5	VT / GN	439	Run/Crank Ignition 1 Voltage	I	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.5	YE / BU	1465	Secondary Fuel Pump Relay Control	II	—
7	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	II	—
8	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	II	—
9	—	—	—	Not Occupied	—	—
10	0.5	VT / GN	4320	Powertrain Sensor Bus Enable	II	—
11	0.5	GN / GY	465	Fuel Pump Primary Relay Control	II	—
12	2.5	BK / GN	1580	Fuel Pump Low Reference	I	—
13	2.5	BU / GN	2120	Secondary Fuel Pump Control	I	—
14	2.5	BK	1750	Ground	III	—
15	0.5	BN	7444	Fuel Pump Assembly Shield Ground	II	—
16 - 18	—	—	—	Not Occupied	—	—
19	0.5	BN / RD	7445	Fuel Line Pressure Sensor 5V Reference	II	—
20	0.5	BU / WH	7446	Fuel Pressure Sensor Signal	II	—
21	0.5	BK / GN	6281	Fuel Level Sensor Low Reference	II	—
22	0.5	BK / BU	6282	Fuel Level Sensor 2 Low Reference	II	—
23	0.5	BK / BN	6284	Fuel Tank Pressure Sensor Low Reference	II	—

K111 Fuel Pump Driver Control Module (L8T+N2N) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
24 - 29	—	—	—	Not Occupied	—	—
30	2.5	YE / GY	4137	Fuel Pump Supply Voltage Phase 2	III	—
31 - 34	—	—	—	Not Occupied	—	—
35	0.5	BK / YE	7447	Fuel Pressure Sensor Low Reference	II	—
36	—	—	—	Not Occupied	—	—
37	0.5	BU / VT	1589	Primary Fuel Level Sensor Signal	II	—
38	0.5	BU / WH	1937	Secondary Fuel Level Sensor Signal	II	—
39	0.5	YE / RD	2709	Fuel Tank Pressure Sensor 5V Reference	II	—
40	0.5	BU / GN	890	Fuel Tank Pressure Sensor Signal	II	—
41 - 42	—	—	—	Not Occupied	—	—
43	0.5	WH	1310	EVAP Vent Solenoid Valve Control	II	—
44 - 45	—	—	—	Not Occupied	—	—
46	2.5	RD / VT	5340	Battery Positive Voltage	III	—

K111 Fuel Pump Driver Control Module (L8T-N2N)



3240109

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 35449315
Service Connector: 85140064
Description: 30-Way F 1.5, 2.8 MCP Series, Sealed(GN)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19329958	J-35616-2A (GY)	J-38125-11A
II	19371214	J-35616-4A (PU)	J-38125-215A

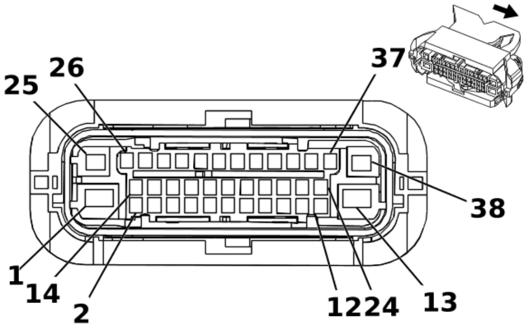
K111 Fuel Pump Driver Control Module (L8T-N2N)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 6	—	—	—	Not Occupied	—	—
7	2.5	RD / VT	5340	Battery Positive Voltage	II	—
8	2.5	GY	120	Fuel Pump Control	II	—
9	2.5	YE / GY	4137	Fuel Pump Supply Voltage Phase 2	II	—
10	0.5	YE / RD	2709	Fuel Tank Pressure Sensor 5V Reference	I	—
11	0.5	BU / GN	890	Fuel Tank Pressure Sensor Signal	I	—
12	0.5	BN / RD	7445	Fuel Line Pressure Sensor 5V Reference	I	—
13	0.5	BU / VT	1589	Primary Fuel Level Sensor Signal	I	—
14	—	—	—	Not Occupied	—	—
15	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	I	—
16	0.5	GN / BU	3889	Powertrain Sensor Bus Relay Control	I	—
17	—	—	—	Not Occupied	—	—
18	0.5	GN / GY	465	Fuel Pump Primary Relay Control	I	—
19 - 20	—	—	—	Not Occupied	—	—
21	0.5	WH	1310	EVAP Vent Solenoid Valve Control	II	—
22	2.5	BK	1750	Ground	II	—
23	0.5	BN	7444	Fuel Pump Assembly Shield Ground	II	—
24	2.5	WH / BN	4138	Fuel Pump Supply Voltage Phase 3	II	—
25	0.5	BK / BN	6284	Fuel Tank Pressure Sensor Low Reference	I	—
26	0.5	BU / WH	7446	Fuel Pressure Sensor Signal	I	—
27	0.5	BK / YE	7447	Fuel Pressure Sensor Low Reference	I	—

K111 Fuel Pump Driver Control Module (L8T-N2N) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
28	0.5	BK / GN	6281	Fuel Level Sensor Low Reference	I	—
29	—	—	—	Not Occupied	—	—
30	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	I	—

K115 Reductant Control Module (L5P)



3240110

Connector Part Information

Harness Type: DEF Wiring Harness
OEM Connector: 13582126
Service Connector: Service by Harness - See Part Catalog
Description: 38-Way F 1.5 CTS, 2.8 MCP, 4.8 MCP Series, Sealed(BK with BK Inner Connector)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

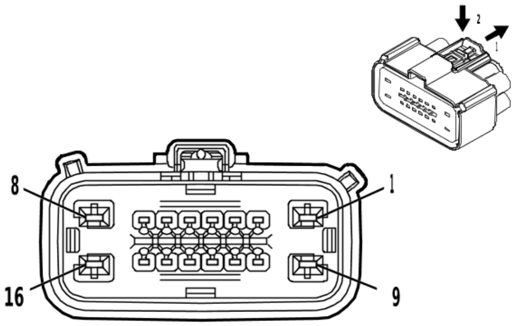
K115 Reductant Control Module (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5 2.5	BK BU	3921 3921	Diesel Exhaust Fluid Heater Control 1 Diesel Exhaust Fluid Heater Control 1	I I	— —
2	0.5 0.5	BN BN	3676 3676	Diesel Exhaust Fluid Heating Tank 2 Heater Control Diesel Exhaust Fluid Heating Tank 2 Heater Control	I I	— L5P
3	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	I	—
4	0.5	YE	3677	Diesel Exhaust Fluid Reservoir Heater Control	I	—
5	—	—	—	Not Occupied	—	—
6	0.5 0.5	BK BK	3244 3244	Diesel Exhaust Fluid Tank Temperature Sensor Signal Diesel Exhaust Fluid Tank Temperature Sensor Signal	I I	— L5P
7	0.5 0.5	BK BK	7290 7290	Diesel Exhaust Fluid Sensor Voltage Reference 1 Diesel Exhaust Fluid Sensor Voltage Reference 1	I I	— L5P
8	0.5	BN	7284	Diesel Exhaust Fluid Liquid Quality Temperature Signal	I	—
9	0.5	BK	8434	Diesel Exhaust Fluid Sensor Low Reference	I	—
10	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	I	—
11	0.5	YE	3876	Diesel Exhaust Fluid Smart Pump Supply Voltage Phase 3	I	—
12	—	—	—	Not Occupied	—	—
13	2.5 2.5	BK / WH BK / WH	1651 1651	Signal Ground Signal Ground	I I	— L5P

K115 Reductant Control Module (L5P) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
14	0.5	BN	2936	Diesel Exhaust Fluid Heating Tank 2 Heater Control Low	I	—
15	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	I	—
16	0.5	BU	4138	Fuel Pump Supply Voltage Phase 3	I	—
17	0.35	VT / YE	5985	Accessory Wake-Up Serial Data	I	—
18	0.5	BN	3245	Diesel Exhaust Fluid Tank Temperature Sensor Low Reference	I	—
19	0.5	BN	3106	Diesel Exhaust Fluid Pressure Sensor 5 Volt Reference	I	—
20	0.5	BU	3108	Diesel Exhaust Fluid Pressure Sensor Signal	I	—
21	0.5	BU	3107	Diesel Exhaust Fluid Pressure Sensor Low Reference	I	—
22	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	I	—
23	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	I	—
24	0.5	BN	3875	Diesel Exhaust Fluid Smart Pump Supply Voltage Phase 2	I	—
25	2.5 0.5	BK / WH BK / WH	1651 1651	Signal Ground Signal Ground	I I	— L5P
26	0.5	WH	3199	Diesel Exhaust Fluid Pressure Line Heater Control	I	—
27	—	—	—	Not Occupied	—	—
28	0.5	BN	4319	Diesel Exhaust Fluid Line Heater Low Control	I	—
29	0.5 0.5	VT / GN BK	4320 4320	Powertrain Sensor Bus Enable Powertrain Sensor Bus Enable	I I	— —
30	0.5	VT / GN	439	Run/Crank Ignition 1 Voltage	I	—
31	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	I	—
32	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	I	—
33	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	I	—
34	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	I	—
35	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	I	—
36	0.5	BU	2937	Diesel Exhaust Fluid Pump Motor Stator Low Reference	I	—
37	0.5	WH	3103	Diesel Exhaust Fluid Smart Pump Control	I	—
38	0.5	RD / WH	3440	Battery Positive Voltage	I	—

K133 Trailer Brake Power Control Module (JL1)



4624589

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33297568
Service Connector: 13599889
Description: 16-Way F 1.5, 2.8 MX Series, Sealed(GY)

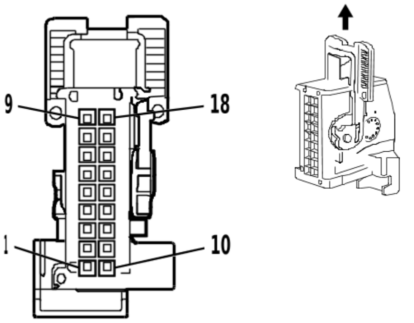
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13576377	J-35616-2A (GY)	J-38125-12A
II	85528055	J-35616-2A (GY)	J-38125-217

K133 Trailer Brake Power Control Module (JL1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	RD / VT	1242	Battery Positive Voltage	I	—
2	0.5	WH / BK	2223	Trailer Brake Apply Signal	II	—
3 - 4	—	—	—	Not Occupied	—	—
5	0.5	YE / BK	2224	Trailer Brake Enable Signal	II	—
6 - 7	—	—	—	Not Occupied	—	—
8	2.5	BU	47	Trailer Auxiliary Control	I	—
9	2.5	BK	1450	Ground	I	—
10 - 11	—	—	—	Not Occupied	—	—
12	0.5	GN / VT	4114	Chassis Control Module LIN Bus 1	II	—
13 - 16	—	—	—	Not Occupied	—	—

K157 Video Processing Control Module X1 (UVI)



1567082

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 10820547
Service Connector: 84976200
Description: 18-Way F Micro-Quadlock Series(BK)

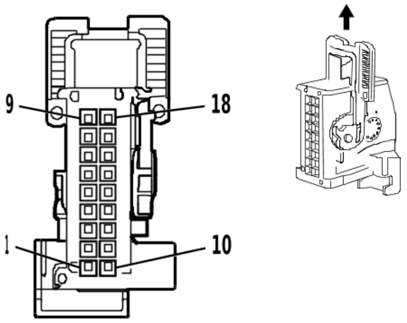
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19300632	J-35616-64B (L-BU)	J-38125-215A

K157 Video Processing Control Module X1 (UVI)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD / GY	1740	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	BK / WH	2751	Signal Ground	I	—
4 - 8	—	—	—	Not Occupied	—	—
9	0.35	GY / GN	1102	Low Speed GMLAN Serial Data 2	I	—
10	0.35	RD / GY	1740	Battery Positive Voltage	I	—
11	—	—	—	Not Occupied	—	—
12	0.75	BK / WH	2751	Signal Ground	I	—
13 - 18	—	—	—	Not Occupied	—	—

K157 Video Processing Control Module X1 (UVS)



1567082

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 10820547
Service Connector: 84976200
Description: 18-Way F Micro-Quadlock Series(BK)

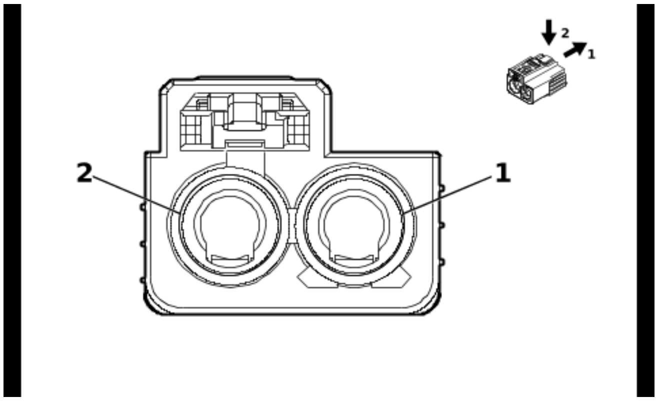
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19300632	J-35616-64B (L-BU)	J-38125-215A

K157 Video Processing Control Module X1 (UVS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD / GY	1740	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	BK / WH	2751	Signal Ground	I	—
4 - 8	—	—	—	Not Occupied	—	—
9	0.35	GY / GN	1102	Low Speed GMLAN Serial Data 2	I	—
10	0.35	RD / GY	1740	Battery Positive Voltage	I	—
11	—	—	—	Not Occupied	—	—
12	0.75	BK / WH	2751	Signal Ground	I	—
13 - 18	—	—	—	Not Occupied	—	—

K157 Video Processing Control Module X3 (UVI)



5810808

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33340388
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 2-Way F Coax Type(RD)

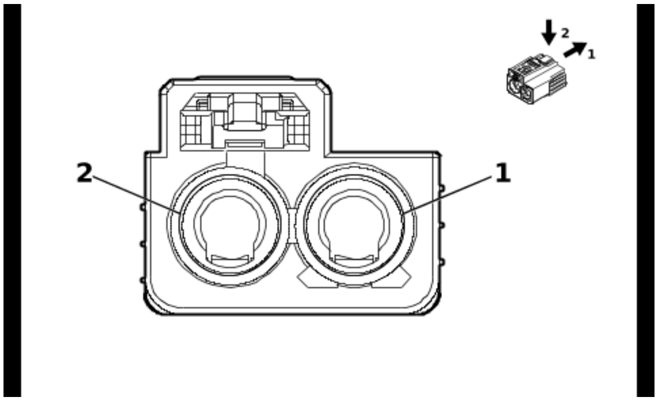
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K157 Video Processing Control Module X3 (UVI)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	2574	Combined Camera Video Signal 2 [+]	I	—
2	—	—	6972	Rearview Camera Signal [+]	I	—

K157 Video Processing Control Module X3 (UVS)



5810808

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33340388
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 2-Way F Coax Type(RD)

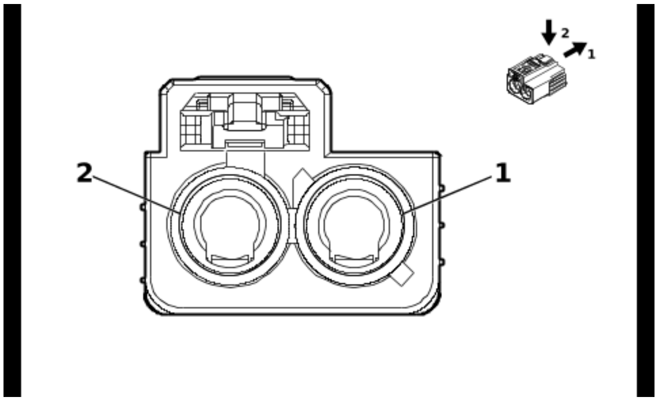
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K157 Video Processing Control Module X3 (UVS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	2574	Combined Camera Video Signal 2 [+]	I	—
2	—	—	—	Not Occupied	—	—

K157 Video Processing Control Module X4 (UVI)



5810836

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33340386
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 2-Way F Coax Type(BG)

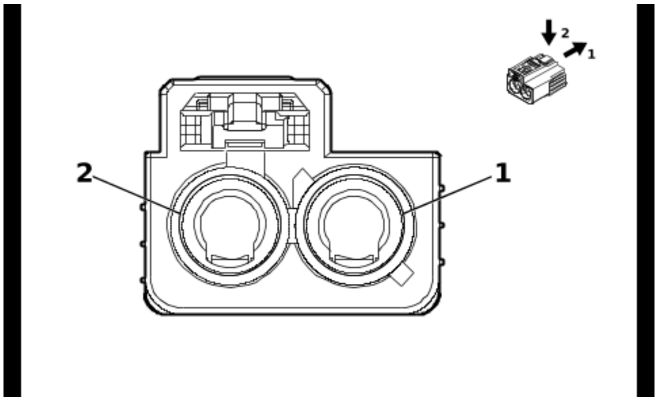
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K157 Video Processing Control Module X4 (UVI)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	6972	Rearview Camera Signal [+]	I	—
2	—	—	2397	Frontview Camera 1 Signal [+]	I	—

K157 Video Processing Control Module X4 (UVS)



5810836

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33340386
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 2-Way F Coax Type(BG)

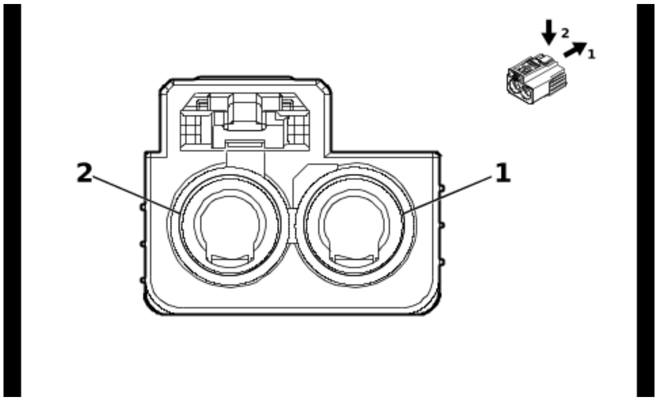
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K157 Video Processing Control Module X4 (UVS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	6972	Rearview Camera Signal [+]	I	—
2	—	—	—	Not Occupied	—	—

K157 Video Processing Control Module X5 (UVS)



5810827

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33340382
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 2-Way F Coax Type(GN)

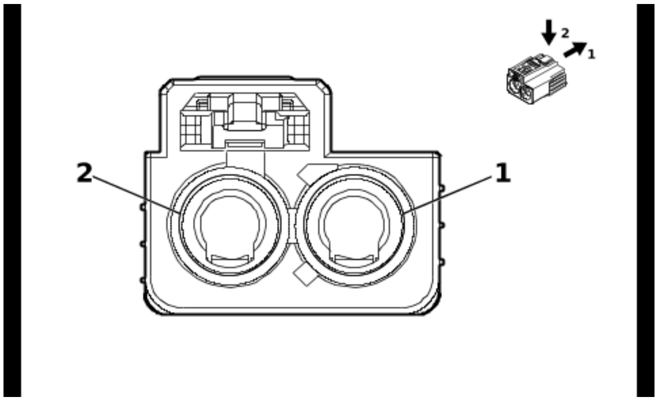
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K157 Video Processing Control Module X5 (UVS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	2628	Left Sideview Camera Video Signal [+]	I	—
2	—	—	6972	Rearview Camera Signal [+]	I	—

K157 Video Processing Control Module X6 (UVS)



5810832

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33340383
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 2-Way F Coax Type(BN)

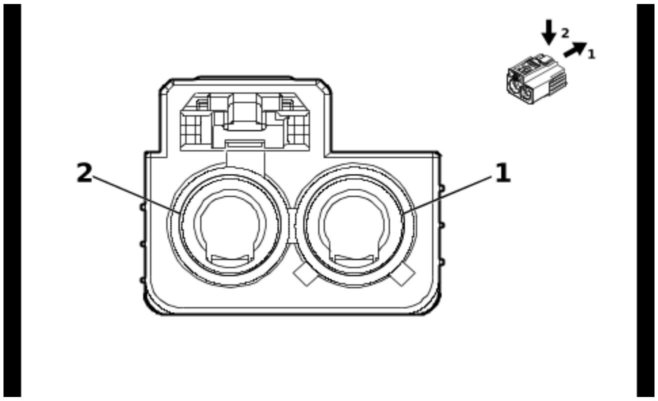
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K157 Video Processing Control Module X6 (UVS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	2627	Right Sideview Camera Video Signal [+]	I	—
2	—	—	2397	Frontview Camera 1 Signal [+]	I	—

K157 Video Processing Control Module X7 (UVS)



5810835

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33340387
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 2-Way F Coax Type(CU)

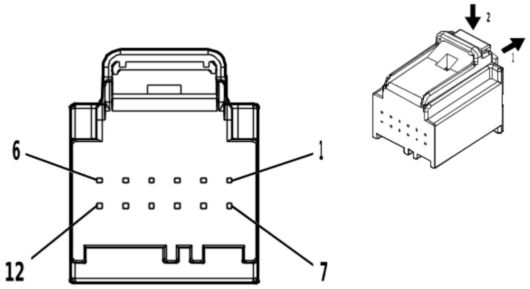
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

K157 Video Processing Control Module X7 (UVS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	2397	Frontview Camera 1 Signal [+]	I	—
2	—	—	2397	Frontview Camera 1 Signal [+]	I	—

K182 Parking Assist Control Module X1 (UD5/UD7)



5095565

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35130710
Service Connector: 13525987
Description: 12-Way F 0.64 Series(BK)

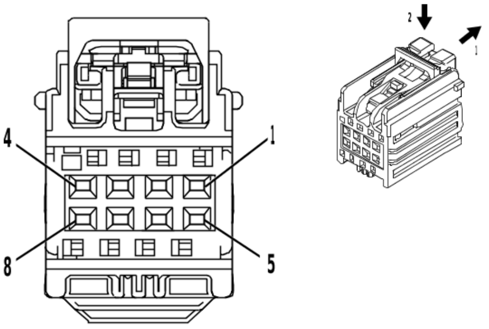
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13584547	J-35616-64B (L-BU)	J-38125-215A

K182 Parking Assist Control Module X1 (UD5/UD7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD / GN	3140	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	GN / BN	5852	Rear Parking Assist Disable LED Signal	I	—
4	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
5 - 7	—	—	—	Not Occupied	—	—
8	0.35	GY / GN	2555	Rear Parking Assist Disable Signal	I	—
9	—	—	—	Not Occupied	—	—
10	0.35 0.5	BK / WH BK / WH	1151 1151	Signal Ground Signal Ground	I I	BTM - BTM
11 - 12	—	—	—	Not Occupied	—	—

K182 Parking Assist Control Module X2 (UD5/UD7)



4280711

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33183559
Service Connector: 19355209
Description: 8-Way F Kaizen Series(GY)

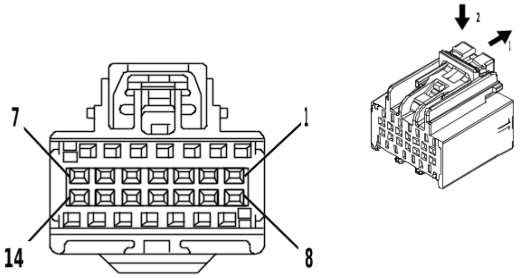
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

K182 Parking Assist Control Module X2 (UD5/UD7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.5	YE / WH	2377	Right Rear Middle Parking Assist Sensor Signal	I	—
3	0.5	YE	2375	Left Rear Outer Parking Assist Sensor Signal	I	—
4	0.5	BN / WH	2374	Object Sensor Voltage Reference	I	—
5	0.5	YE / VT	2378	Right Rear Outer Parking Assist Sensor Signal	I	—
6	0.5	YE / BU	2376	Left Rear Middle Parking Assist Sensor Signal	I	—
7	—	—	—	Not Occupied	—	—
8	0.5	BK / GY	2379	Object Sensor Low Reference	I	—

K182 Parking Assist Control Module X3 (UD5/UD7)



4547098

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35014564
Service Connector: 19354933
Description: 14-Way F 0.64 Kaizen Series(BU)

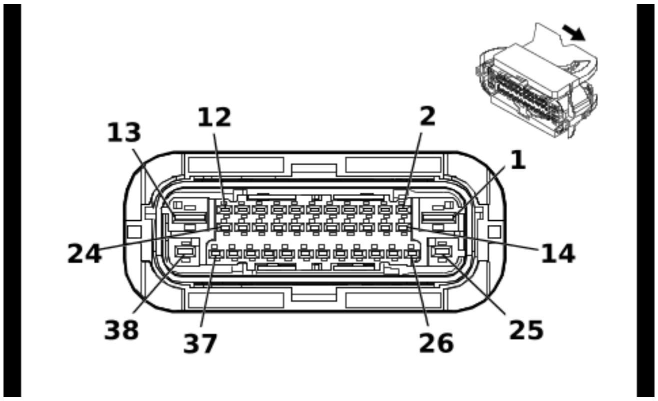
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19303553	J-35616-64B (L-BU)	J-38125-215A

K182 Parking Assist Control Module X3 (UD5/UD7)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE / VT	5213	Front Left/Right/Middle Parking Assist Sensor	I	—
2 - 3	—	—	—	Not Occupied	—	—
4	0.5	YE / GY	5216	Left Front Middle Parking Assist Sensor	I	—
5	0.5	WH / GY	5217	Right Front Outer Parking Assist Sensor	I	—
6 - 7	—	—	—	Not Occupied	—	—
8	0.5	BK / BU	5214	Front Parking Assist Sensor Low Reference	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	VT / WH	5215	Left Front Outer Parking Assist Sensor	I	—
11	0.5	VT / GY	5218	Right Front Middle Parking Assist Sensor	I	—
12 - 14	—	—	—	Not Occupied	—	—

K194 Rear Gate Module (QT6)



5512176

Connector Part Information

Harness Type: Endgate Wiring Harness
OEM Connector: 35503405
Service Connector: Service by Harness - See Part Catalog
Description: 38-Way F 1.5, 2.8, 4.8 MCP Series, Sealed(BK with BK Inner Connector)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required
II	Not required	J-35616-35 (VT)	No Tool Required
III	Not required	J-35616-40 (BU)	No Tool Required

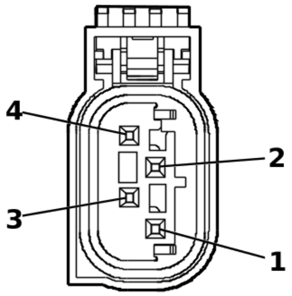
K194 Rear Gate Module (QT6)

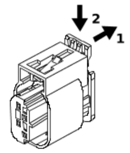
Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BK	1450	Ground	III	—
2 - 4	—	—	—	Not Occupied	—	—
5	0.35	PK / BK	4668	Rear Closure Latch Pawl Status Signal	I	—
6	0.35	GY / VT	4678	Rear Closure Latch Unlatch Status	I	—
7	0.35	GN / BK	4659	Rear Closure Open Switch Signal	I	—
8	0.35	BU / BK	4665	Rear Closure Latch Ratchet Status	I	—
9	—	—	—	Not Occupied	—	—
10	0.35	YE	1144	Endgate Release Switch Discrete Signal Exterior	I	—
11	—	—	—	Not Occupied	—	—
12	0.5	GY	1198	Endgate Release Switch Analog Signal Interior	I	—
13	2.5	RD / GY	7040	Battery Positive Voltage	III	—
14	0.5	GN	5060	Low Speed GMLAN Serial Data	I	—
15	—	—	—	Not Occupied	—	—
16	0.35	YE / RD	7734	Rear Closure Latch 2 Ratchet Status Signal	I	—
17	—	—	—	Not Occupied	—	—
18	0.35	BN / RD	4683	Rear Closure Position Sensor Voltage Reference	I	—
19	0.35	BK / GN	4687	Rear Closure Position Sensor Low Reference	I	—
20	—	—	—	Not Occupied	—	—
21	0.35	BN / YE	4686	Rear Closure Position Sensor Signal 2	I	—

K194 Rear Gate Module (QT6) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
22	0.35	BU / WH	4685	Rear Closure Position Sensor Signal 1	I	—
23	0.35	WH	7735	Rear Closure Latch 2 Pawl Status Signal	I	—
24	0.35	VT	7736	Rear Closure Latch 2 Unlatch Status Signal	I	—
25	1	BN / WH	4690	Rear Closure Open/Close Motor Close Control	II	—
26	0.35	BU	7733	Rear Closure Latch 2 Sector Status Signal	I	—
27	0.35	GY / BK	1575	Rear Closure Sensor Low Reference 2	I	—
28	0.35	BK / VT	4656	Rear Closure Object Sensor Low Reference	I	—
29	—	—	—	Not Occupied	—	—
30	1	BU	1509	Rear Closure Cinch Latch Motor 2 Release Control	I	—
31	1	PK	1499	Rear Closure Cinch Latch Motor 2 Cinch Control	I	—
32	—	—	—	Not Occupied	—	—
33	1	BU / GY	4682	Rear Closure Cinch Latch Motor Release Control	I	—
34	1	BN	4681	Rear Closure Cinch Latch Motor Cinch Control	I	—
35	0.5	GN	1577	Rear Closure Clutch Control	I	—
36	0.5	OG / WH	1590	Rear Closure Clutch Low Return	I	—
37	—	—	—	Not Occupied	—	—
38	1	WH	4689	Rear Closure Open/Close Motor Open Control	II	—

K214 Trailer Tire Pressure Indicator Module (PTT)





5215490

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 13655424
Service Connector: 86825461
Description: 4-Way F 0.64 MTS Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

K214 Trailer Tire Pressure Indicator Module (PTT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD / GN	1840	Battery Positive Voltage	I	—
2	0.75	BK	1750	Ground	I	—
3	0.5	BU / GN	1304	High Speed GMLAN Serial Data [+] 9	I	—
4	0.5	WH / GN	1305	High Speed GMLAN Serial Data [-] 9	I	—

M4 Air Inlet Door Actuator

—

Connector Part Information

Harness Type: HVAC Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

M4 Air Inlet Door Actuator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BU / GY	3173	Air Inlet Door Actuator Control 1	I	—
2	—	GY / BU	7572	HVAC Door Actuator Control	I	—
3	—	BN / WH	3174	Air Inlet Door Actuator Control 2	I	—
4	—	YE	3175	Air Inlet Door Actuator Control 3	I	—
6	—	WH	3176	Air Inlet Door Actuator Control 4	I	—

M6L Air Temperature Door Actuator - Left

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Connector Part Information

Harness Type: HVAC Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

M6L Air Temperature Door Actuator - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	WH / BK	3169	Air Temperature Door Actuator Control 1	I	—
2	— —	BN / VT BN	7572 7572	HVAC Door Actuator Control HVAC Door Actuator Control	I I	C67/ C4P/ CJ2 CJ2
3	—	VT / GN	3170	Air Temperature Door Actuator Control 2	I	—
4	—	YE / GN	3171	Air Temperature Door Actuator Control 3	I	—
6	—	GY / BU	3172	Air Temperature Door Actuator Control 4	I	—

M6R Air Temperature Door Actuator - Right (CJ2)

—

Connector Part Information

Harness Type: HVAC Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way

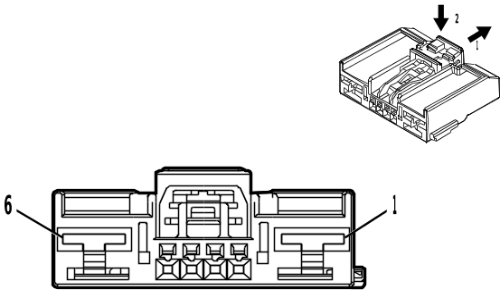
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

M6R Air Temperature Door Actuator - Right (CJ2)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	YE / BK	3181	Passenger Air Temperature Door Actuator Control 1	I	—
2	—	BN / VT	7572	HVAC Door Actuator Control	I	—
3	—	WH / BU	3182	Passenger Air Temperature Door Actuator Control 2	I	—
4	—	WH / YE	3183	Passenger Air Temperature Door Actuator Control 3	I	—
6	—	VT / GY	3184	Passenger Air Temperature Door Actuator Control 4	I	—

M8 Blower Motor



4650258

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 33395154
Service Connector: 19356432
Description: 6-Way F 0.64, 6.3 Series(BK)

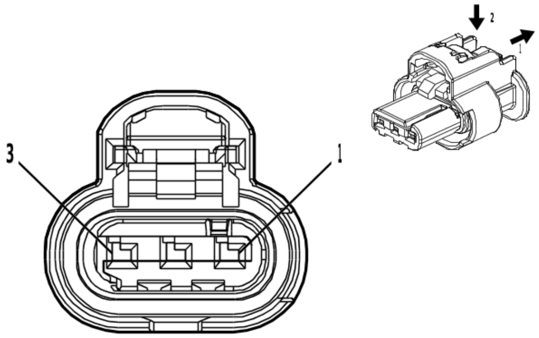
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-42 (RD)	No Tool Required
II	Not required	J-35616-64B (L-BU)	No Tool Required

M8 Blower Motor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	4	RD / VT	542	Battery Positive Voltage	I	—
2	0.35	BU / GY	754	Blower Motor Speed Control	II	—
3	0.35	GN / BU	761	Blower Speed Feedback Signal	II	—
4 - 5	—	—	—	Not Occupied	—	—
6	4	BK	1050	Ground	I	—

M10 Charge Air Cooler Coolant Pump (L5P)



4581126

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33358800
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.2 MCON-CB Series, Sealed(BK)

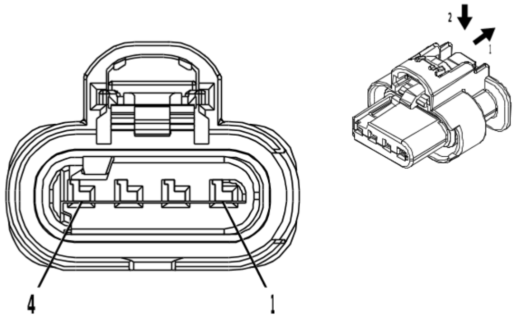
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

M10 Charge Air Cooler Coolant Pump (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	BK	4450	Ground	I	—
2	0.5	VT / BU	5126	Coolant Pump Control	I	—
3	0.5	GN / VT	4621	Engine Control Module LIN Bus 1	I	—

M26 Front Axle Engagement Actuator (NQF/NQH)



4210809

Connector Part Information

Harness Type: Transfer Case Selector Shift Control Switch Wiring Harness Extension Harness
OEM Connector: 33390897
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 1.2 MCON-CB Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

M26 Front Axle Engagement Actuator (NQF/NQH)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT / BK	2139	Run/Crank Ignition 1 Voltage	I	—
2	0.5	GY / BK	1570	Front Axle Actuator Control	I	—
3	0.5	YE / WH	1695	4WD Locked Range Indicator Control	I	—
4	0.5	BK	4450	Ground	I	—

M37 Mode Door Actuator

—

Connector Part Information

Harness Type: HVAC Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way

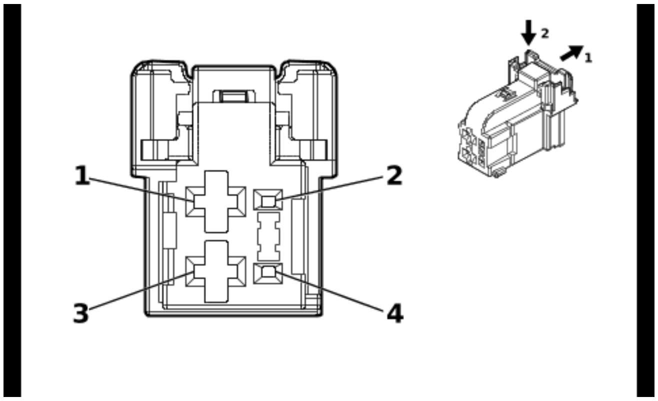
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

M37 Mode Door Actuator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	GY	3165	Mode Door Actuator Control 1	I	—
2	— —	BN BN / VT	7572 7572	HVAC Door Actuator Control HVAC Door Actuator Control	I I	C67 CJ2
3	—	BN / GN	3166	Mode Door Actuator Control 2	I	—
4	—	BU / BN	3167	Mode Door Actuator Control 3	I	—
6	—	BN	3168	Mode Door Actuator Control 4	I	—

M50D Seat Front Vertical Motor - Driver



5410027

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 2316171-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series(BK)

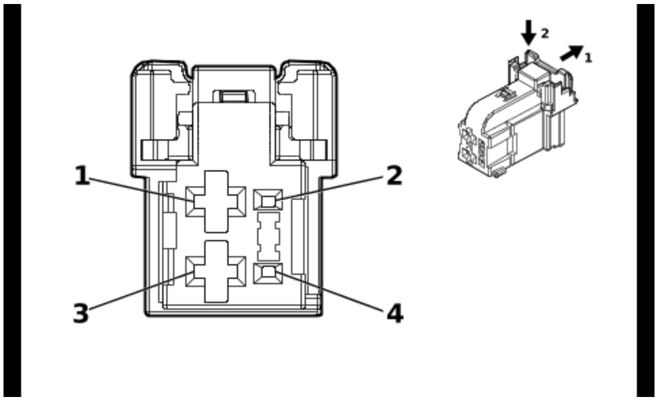
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required
II	Not required	J-35616-64B (L-BU)	No Tool Required

M50D Seat Front Vertical Motor - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	BU / VT	287	Driver Seat Front Vertical Motor Down Control	I	—
2	0.5	WH / RD	3298	Seat Position Sensors High Reference 2	II	—
3	1.5	GN / BN	286	Driver Seat Front Vertical Motor Up Control	I	—
4	0.5	BN / WH	557	Seat Front Vertical Motor Position Sensor Signal	II	—

M50P Seat Front Vertical Motor - Passenger (A7K)



5410027

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 2316171-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series(BK)

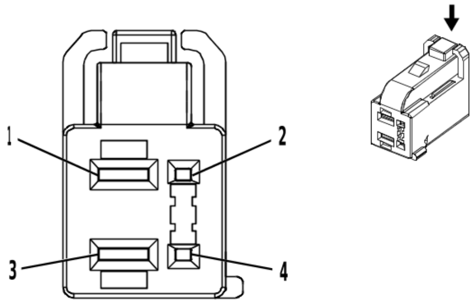
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

M50P Seat Front Vertical Motor - Passenger (A7K)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN / VT	297	Passenger Seat Front Vertical Motor Up Control	I	—
2	—	—	—	Not Occupied	—	—
3	1.5	GN / BU	298	Passenger Seat Front Vertical Motor Down Control	I	—
4	—	—	—	Not Occupied	—	—

M51D Seat Horizontal Motor - Driver



3683652

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 2272784-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series(BK)

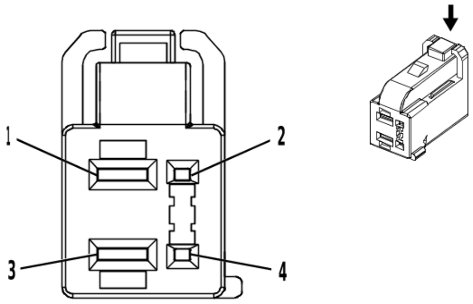
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required
II	Not required	J-35616-64B (L-BU)	No Tool Required

M51D Seat Horizontal Motor - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GY / GN	284	Driver Seat Horizontal Motor Rearward Control	I	—
2	0.5	GN	569	Seat Horizontal Motor Position Sensor Signal	I	—
3	1.5	YE / BU	285	Driver Seat Horizontal Motor Forward Control	I	—
4	0.5	WH / RD	3298	Seat Position Sensors High Reference 2	II	—

M51P Seat Horizontal Motor - Passenger (A7K)



3683652

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 2272784-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series(BK)

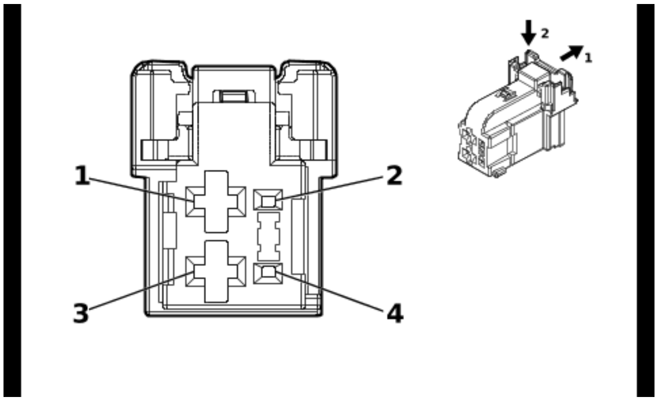
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required

M51P Seat Horizontal Motor - Passenger (A7K)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	YE / BU	290	Passenger Seat Horizontal Motor Rearward Control	I	—
2	—	—	—	Not Occupied	—	—
3	1.5	YE / WH	296	Passenger Seat Horizontal Motor Forward Control	I	—
4	—	—	—	Not Occupied	—	—

M55D Seat Rear Vertical Motor - Driver



5410027

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 2316171-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series(BK)

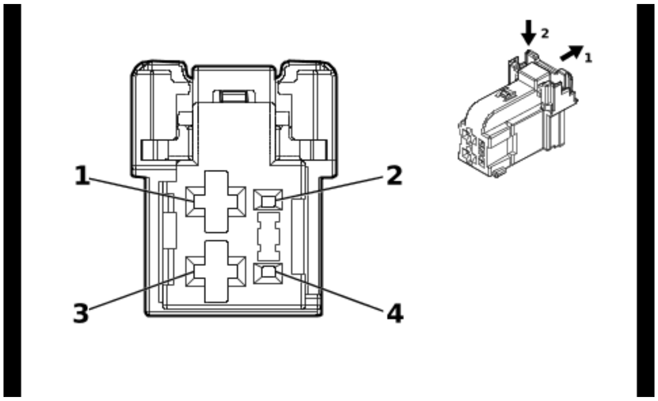
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required
II	Not required	J-35616-64B (L-BU)	No Tool Required

M55D Seat Rear Vertical Motor - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GY / BU	283	Driver Seat Rear Vertical Motor Down Control	I	—
2	0.5	YE / BU	568	Seat Rear Vertical Motor Position Sensor Signal	II	—
3	1.5	YE	282	Driver Seat Rear Vertical Motor Up Control	I	—
4	0.5	WH / RD	3298	Seat Position Sensors High Reference 2	II	—

M55P Seat Rear Vertical Motor - Passenger (A7K)



5410027

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 2316171-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series(BK)

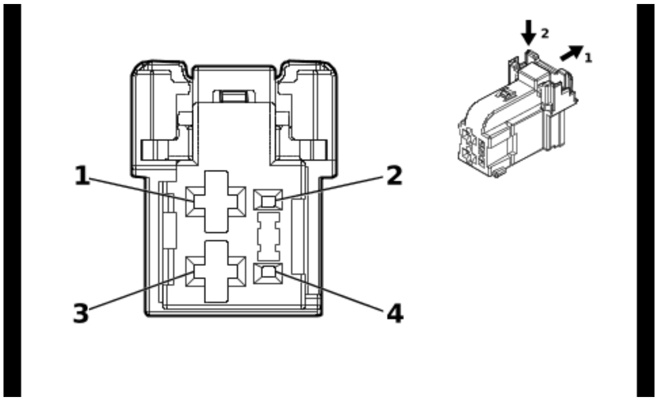
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

M55P Seat Rear Vertical Motor - Passenger (A7K)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	BU / WH	289	Passenger Seat Rear Vertical Motor Down Control	I	—
2	—	—	—	Not Occupied	—	—
3	1.5	GN / WH	288	Passenger Seat Rear Vertical Motor Up Control	I	—
4	—	—	—	Not Occupied	—	—

M56D Seat Recline Motor - Driver



5410027

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 2316171-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series(BK)

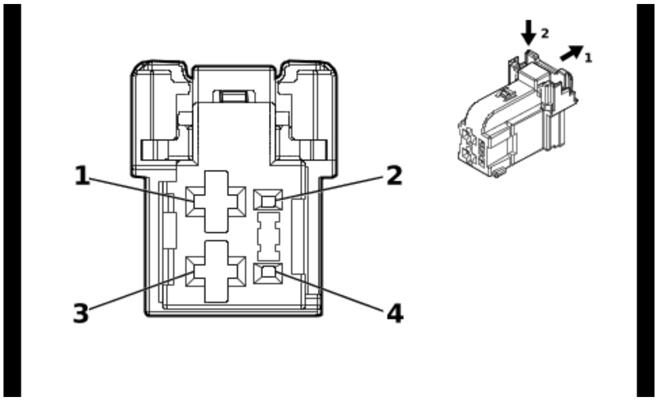
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required
II	Not required	J-35616-64B (L-BU)	No Tool Required

M56D Seat Recline Motor - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN / YE	276	Driver Seat Recline Motor Forward Control	I	—
2	0.5	WH / RD	3298	Seat Position Sensors High Reference 2	II	—
3	1.5	BU / YE	277	Driver Seat Recline Motor Rearward Control	I	—
4	0.5	WH / BK	570	Driver Seat Recline Motor Position Sensor Signal	II	—

M56P Seat Recline Motor - Passenger (A7L)



5410027

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 2316171-1
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64, 2.8 Series(BK)

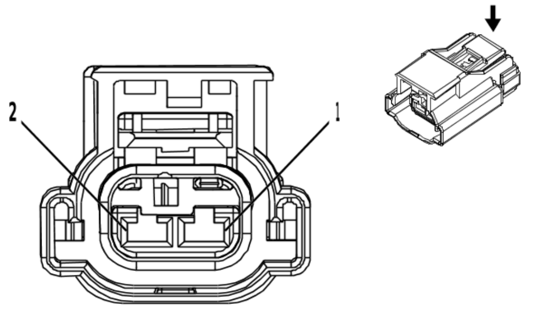
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

M56P Seat Recline Motor - Passenger (A7L)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	GN	76	Passenger Seat Recline Motor Forward Control	I	—
2	—	—	—	Not Occupied	—	—
3	1.5	BU / BN	77	Passenger Seat Recline Motor Rearward Control	I	—
4	—	—	—	Not Occupied	—	—

M63 Sliding Rear Window Motor (A48)



2716333

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 13863838
Service Connector: 19301518
Description: 2-Way F 2.8 Series, Sealed(BK)

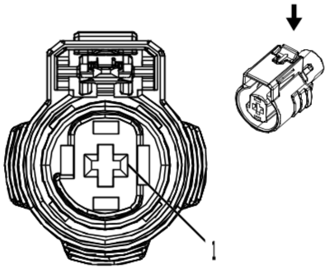
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

M63 Sliding Rear Window Motor (A48)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	YE / BU	5442	Endgate Window Motor Up Signal	I	—
2	2	GY / GN	5441	Endgate Window Motor Down Signal	I	—

M64 Starter Motor X1



2717134

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 15526411
Service Connector: 19300471
Description: 1-Way F 2.8 MCP Series, Sealed(BK)

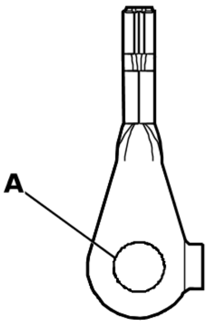
Terminal Part Information

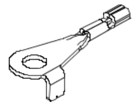
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

M64 Starter Motor X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	YE	6	Starter Solenoid Crank Ignition Voltage	I	—

M64 Starter Motor X2





5200091

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 35181369
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way Ring Terminal

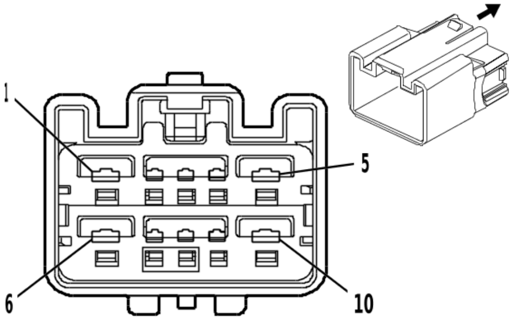
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

M64 Starter Motor X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	2.5	RD / YE	2	Battery Positive Voltage	II	L5P
	2.5	YE	6	Starter Solenoid Crank Ignition Voltage	I	L8T

M69 Sunroof Motor (CF5)



1851890

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 13506926
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way M Kaizen Series(L-GY)

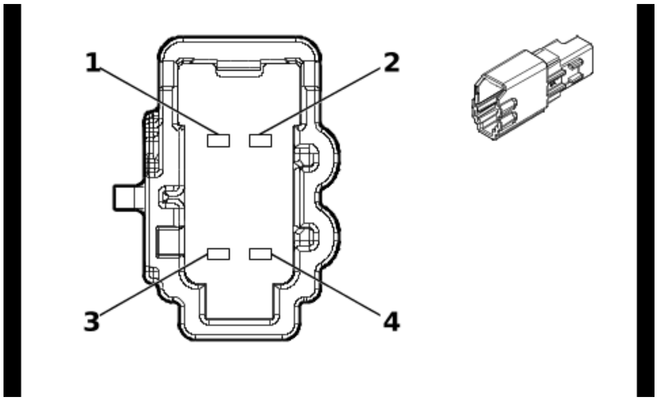
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-3 (GY)	No Tool Required
II	Not required	J-35616-5 (PU)	No Tool Required

M69 Sunroof Motor (CF5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.35	BK / GY	128	Sunroof Switch Low Reference	I	—
4	0.35	GN / BN	6132	Body Control Module LIN Bus 1	I	—
5	2.5	BK	1050	Ground	II	—
6	2.5	RD / GN	3140	Battery Positive Voltage	II	—
7	0.35	BU / VT	5027	Sunroof Switch Serial Data 1 Signal	I	—
8	—	—	—	Not Occupied	—	—
9	0.35	WH / GN	3031	Sunroof Vent Switch Signal	I	—
10	—	—	—	Not Occupied	—	—

M73A Seat Blower Motor - Driver Back



5423974

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 6098-9049
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 MCON Series(GY)

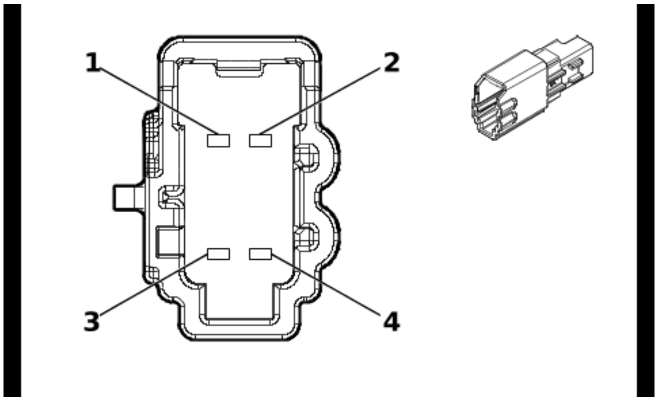
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-13 (BU)	No Tool Required
II	Not required	J-35616-17 (L-GN)	No Tool Required

M73A Seat Blower Motor - Driver Back

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT / WH	4939	Run/Crank Ignition 1 Voltage	I	—
2	0.5	GN / VT	5906	Driver Seat Blower Motor Control 1	II	—
3	0.75	BK	1150	Ground	I	—
4	—	—	—	Not Occupied	—	—

M73B Seat Blower Motor - Passenger Back (KQV)



5423974

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 6098-9049
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 MCON Series(GY)

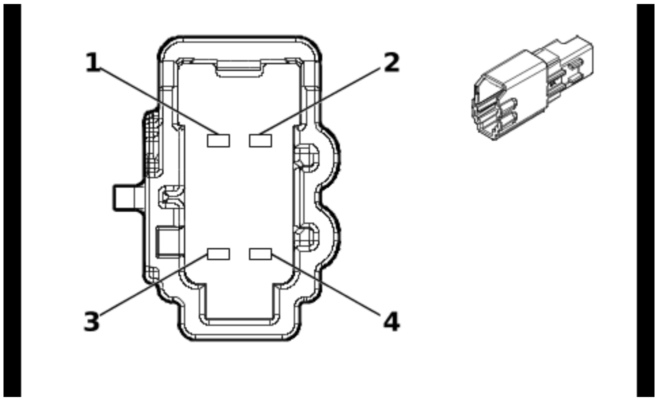
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-13 (BU)	No Tool Required
II	Not required	J-35616-17 (L-GN)	No Tool Required

M73B Seat Blower Motor - Passenger Back (KQV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT / WH	4939	Run/Crank Ignition 1 Voltage	I	—
2	0.5	WH	5908	Passenger Seat Blower Motor Control 1	II	—
3	0.75	BK	1250	Ground	I	—
4	—	—	—	Not Occupied	—	—

M73C Seat Blower Motor - Driver Cushion



5423974

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 6098-9049
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 MCON Series(GY)

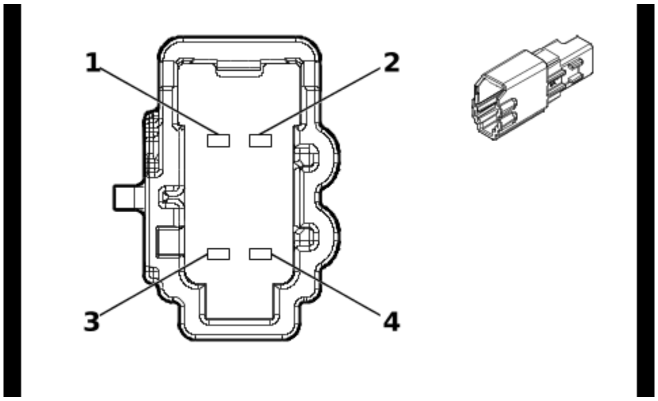
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-13 (BU)	No Tool Required
II	Not required	J-35616-17 (L-GN)	No Tool Required

M73C Seat Blower Motor - Driver Cushion

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT / WH	4939	Run/Crank Ignition 1 Voltage	I	—
2	0.5	GN / VT	5906	Driver Seat Blower Motor Control 1	II	—
3	0.75	BK	1150	Ground	I	—
4	—	—	—	Not Occupied	—	—

M73D Seat Blower Motor - Passenger Cushion (KQV)



5423974

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 6098-9049
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.2 MCON Series(GY)

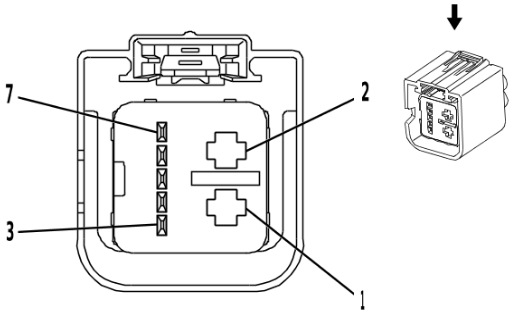
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-13 (BU)	No Tool Required
II	Not required	J-35616-17 (L-GN)	No Tool Required

M73D Seat Blower Motor - Passenger Cushion (KQV)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	VT / WH	4939	Run/Crank Ignition 1 Voltage	I	—
2	0.5	WH	5908	Passenger Seat Blower Motor Control 1	II	—
3	0.75	BK	1250	Ground	I	—
4	—	—	—	Not Occupied	—	—

M74D Window Motor - Driver (AXG)



2282932

Connector Part Information

Harness Type: Driver Door Wiring Harness
OEM Connector: 15504732
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way F 0.64, 2.8 Kaizen Timer Series, Sealed(GY)

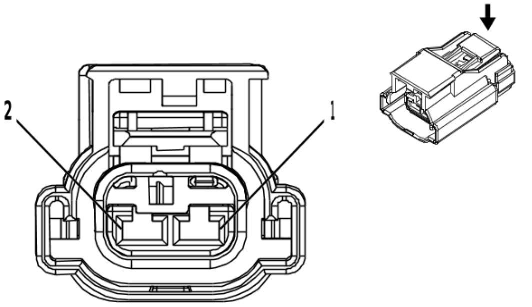
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required
II	Not required	J-35616-64B (L-BU)	No Tool Required

M74D Window Motor - Driver (AXG)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BK	1150	Ground	I	—
2	2.5	RD / BU	1842	Battery Positive Voltage	I	—
3	0.35	GN / WH	3379	Window Switch Driver Up Signal	II	—
4	0.5	GN / YE	6134	Body Control Module LIN Bus 3	II	—
5	0.35	GN	3381	Window Switch Driver Express Signal	II	—
6	0.5	PK	745	Left Front Door Ajar Switch Signal	II	—
7	0.5	GY	3380	Driver Window Main Control Down Switch Signal	II	—

M74LR Window Motor - Left Rear (AEQ)



2716333

Connector Part Information

Harness Type: Left Rear Door Wiring Harness
OEM Connector: 13863838
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed(BK)

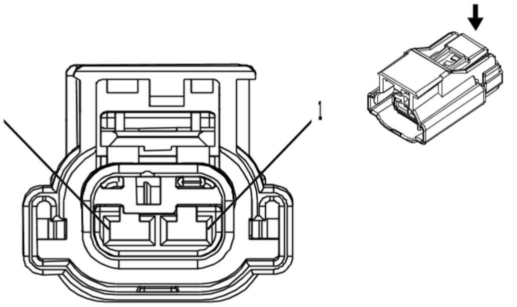
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

M74LR Window Motor - Left Rear (AEQ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	BU / VT	668	Left Rear Window Motor Up Control	I	—
2	2	YE / BU	669	Left Rear Window Motor Down Control	I	—

M74P Window Motor - Passenger (AED)



2716333

Connector Part Information

Harness Type: Passenger Door Wiring Harness
OEM Connector: 13863838
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed(BK)

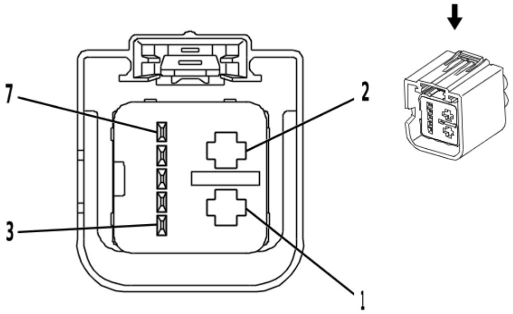
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

M74P Window Motor - Passenger (AED)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	GN / GY	3387	Passenger Window Motor Up Control	I	—
2	2	YE / BU	3388	Passenger Window Motor Down Control	I	—

M74P Window Motor - Passenger (AEF)



2282932

Connector Part Information

Harness Type: Passenger Door Wiring Harness
OEM Connector: 15504732
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way F 0.64, 2.8 Kaizen Timer Series, Sealed(GY)

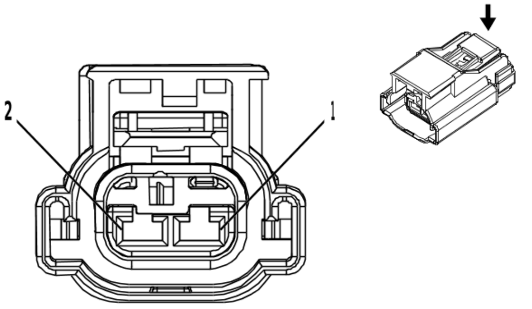
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required
II	Not required	J-35616-64B (L-BU)	No Tool Required

M74P Window Motor - Passenger (AEF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BK	1250	Ground	I	—
2	2.5	RD / WH	1340	Battery Positive Voltage	I	—
3	0.35	YE / BK	3384	Window Switch Passenger Up Signal	II	—
4	0.35	GN / YE	6134	Body Control Module LIN Bus 3	II	—
5	0.35	VT / GY	3386	Window Switch Passenger Express Signal	II	—
6	0.5	GY	746	Right Front Door Ajar Switch Signal	II	—
7	0.5	BN / YE	3385	Window Switch Passenger Down Signal	II	—

M74RR Window Motor - Right Rear



2716333

Connector Part Information

Harness Type: Right Rear Door Wiring Harness
OEM Connector: 13863838
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed(BK)

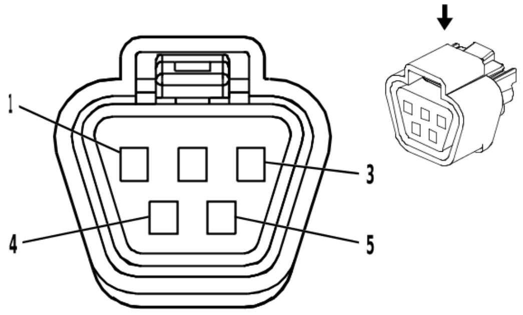
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

M74RR Window Motor - Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	BU / GY	670	Right Rear Window Motor Up Control	I	—
2	2	GN / BK	671	Right Rear Window Motor Down Control	I	—

M75 Windshield Wiper Motor



1715213

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 15316488
Service Connector: 13587179
Description: 5-Way F 090 Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required
II	Not required	J-35616-18 (BK)	No Tool Required

M75 Windshield Wiper Motor

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2	YE / BN	95	Windshield Wiper Motor Low Speed Control	II	—
2	—	—	—	Not Occupied	—	—
3	0.5	BN / GN	196	Windshield Wiper Motor Park Switch Signal	I	—
4	2	WH	92	Windshield Wiper Motor High Speed Control	II	—
5	2	BK	150	Ground	II	—

M77D Outside Rearview Mirror Motor - Driver

—

Connector Part Information

Harness Type: Door Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

M77D Outside Rearview Mirror Motor - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BU / RD	3393	Driver Outside Rearview Mirror Position Sensor Low Reference	I	—
2	—	BU / WH	3390	Driver Outside Rearview Mirror Motor Up [+] Down [-] Control	I	—
3	—	GN	3394	Driver Outside Rearview Mirror Position Sensor Up [+] Down [-] Signal	I	—
4	—	WH	3391	Driver Mirror Motor Common Control	I	—
5	—	GY	3395	Driver Outside Rearview Mirror Position Sensor Left [-] Right [+] Signal	I	—
7	—	BN / WH	3392	Driver Outside Rearview Mirror Position Sensor 5V Reference	I	—
8	—	GN / WH	3389	Driver Outside Rearview Mirror Motor Right [+] Left [-] Control	I	—

M77P Outside Rearview Mirror Motor - Passenger

—

Connector Part Information

Harness Type: Door Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

M77P Outside Rearview Mirror Motor - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BU / RD	3400	Passenger Outside Rearview Mirror Position Sensor Low Reference	I	—
2	—	BU / WH	3397	Passenger Outside Rearview Mirror Motor Up [+] Down [-] Control	I	—
3	—	GN	3401	Passenger Outside Rearview Mirror Position Sensor Up [+] Down [-] Signal	I	—
4	—	WH	3398	Passenger Outside Rearview Mirror Motor Common Control	I	—
5	—	GY	3403	Passenger Outside Rearview Mirror Position Sensor Left [-] Right [+] Signal	I	—
7	—	BN / WH	3399	Passenger Outside Rearview Mirror Position Sensor Voltage Reference	I	—
8	—	GN / WH	3396	Passenger Outside Rearview Mirror Motor Right [+] Left [-] Control	I	—

M78D Outside Rearview Mirror Folding Motor - Driver

—

Connector Part Information

Harness Type: Door Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

M78D Outside Rearview Mirror Folding Motor - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BU	3410	Mirror Outside Rearview Mirror Fold Control	I	—
2	—	YE	3409	Outside Rearview Mirror Motor Unfold Control	I	—

M78P Outside Rearview Mirror Folding Motor - Passenger

—

Connector Part Information

Harness Type: Door Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

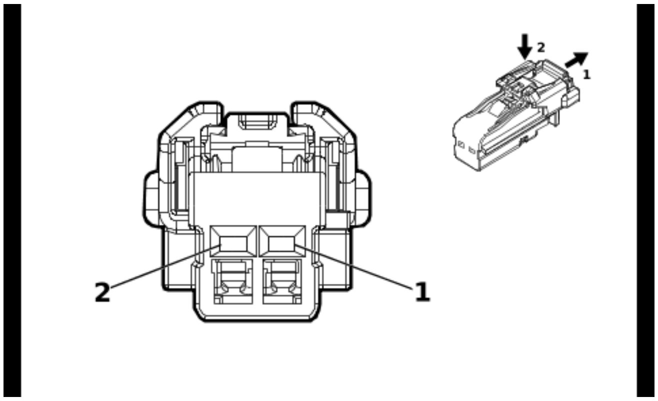
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

M78P Outside Rearview Mirror Folding Motor - Passenger

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BU	3410	Mirror Outside Rearview Mirror Fold Control	I	—
2	—	YE	3409	Outside Rearview Mirror Motor Unfold Control	I	—

M93 Key Capture Solenoid Actuator (BTM)



4115691

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35311666
Service Connector: 87816612
Description: 2-Way F 1.2 MCON Series(BK)

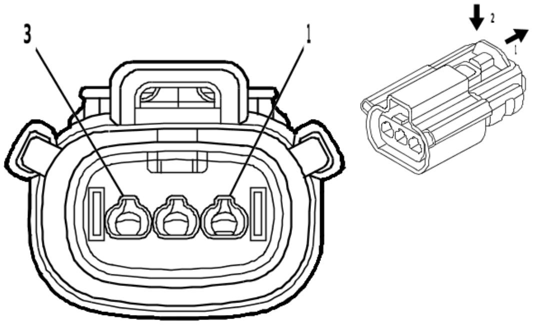
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

M93 Key Capture Solenoid Actuator (BTM)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT / GY	1630	Steering Column Key Cylinder Lock Solenoid Actuator Control	I	—
2	0.35	BK	1850	Ground	I	—

M96A Active Grille Air Shutter 1 Actuator (WMI)



5095610

Connector Part Information

Harness Type: Aero Shutter Wiring Harness
OEM Connector: 33471-3306
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 1.5 Series, Sealed(BK)

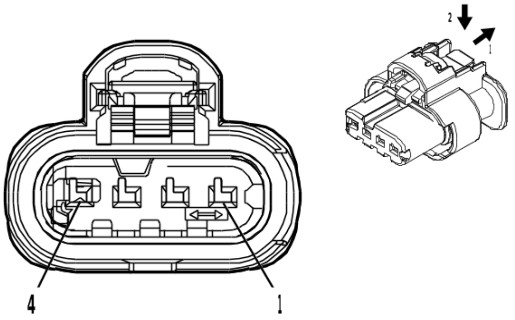
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

M96A Active Grille Air Shutter 1 Actuator (WMI)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	VT / BU	5705	Powertrain Main Relay Control	I	—
2	—	GN / VT	4621	Engine Control Module LIN Bus 1	I	—
3	—	BK	4450	Ground	I	—

M96B Active Grille Air Shutter 2 Actuator (WMI)



4934614

Connector Part Information

Harness Type: Aero Shutter Wiring Harness
OEM Connector: 999523
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 1.2 MCON-CB Series, Sealed(BK)

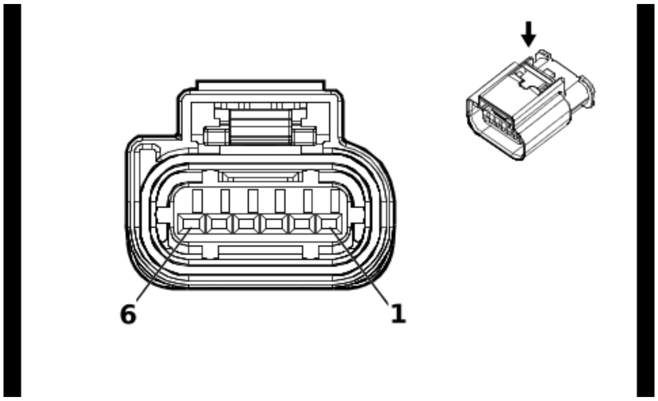
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
I	Not required	No Tool Required	No Tool Required

M96B Active Grille Air Shutter 2 Actuator (WMI)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT / BU	5705	Powertrain Main Relay Control	I	—
2	0.5 — 0.5	GN / VT BK GN / VT	4621 4450 4621	Engine Control Module LIN Bus 1 Ground Engine Control Module LIN Bus 1	I I I	— VRI/ WMI WMI
3	0.5	BK	4450	Ground	I	—
4	1.5	BK	4450	Ground	I	—

M103 Turbocharger Vane Position Actuator



5483505

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13507084
Service Connector: 84981395
Description: 6-Way F 1.2 MCON Series, Sealed(BK)

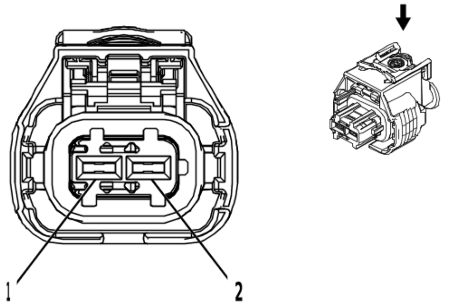
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

M103 Turbocharger Vane Position Actuator

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	I	L5P
2	0.5	BK / WH	251	Signal Ground	I	L5P
3	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	I	L5P
4	0.5	BU / BN	4498	High Speed GMLAN Serial Data [+] 7	I	L5P
5	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	I	L5P
6	0.5	WH	4499	High Speed GMLAN Serial Data [-] 7	I	L5P

M104L Park Brake Actuator - Left



2577394

Connector Part Information

Harness Type: Chassis Rear Wiring Harness Extension Harness
OEM Connector: 13343443
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed(BK)

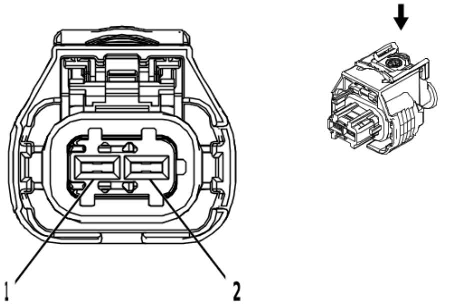
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

M104L Park Brake Actuator - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	GY / BK	4369	Left Park Brake Motor Low Reference	I	—
2	2.5	WH	2001	Left Park Brake Motor Apply Control	I	—

M104R Park Brake Actuator - Right



Connector Part Information

Harness Type: Chassis Rear Wiring Harness Extension Harness
OEM Connector: 1928405714
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed(BK)

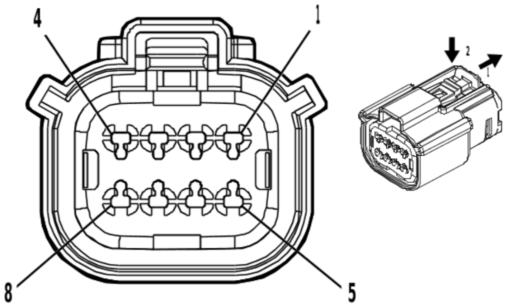
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

M104R Park Brake Actuator - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	GY	4368	Right Park Brake Motor Low Reference	I	—
2	2.5	GN / VT	1988	Right Park Brake Motor Apply Control	I	—

M125 Pickup Box Endgate Power Assist Actuator (QT6)



4846407

Connector Part Information

Harness Type: Endgate Wiring Harness
OEM Connector: 35037827
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 1.5 MX Series, Sealed(BK)

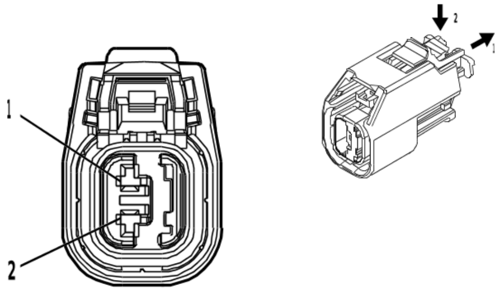
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

M125 Pickup Box Endgate Power Assist Actuator (QT6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1	BN / WH	4690	Rear Closure Open/Close Motor Close Control	I	—
2	0.5	GN	1577	Rear Closure Clutch Control	I	—
3	0.5	OG / WH	1590	Rear Closure Clutch Low Return	I	—
4	0.35	BN / RD	4683	Rear Closure Position Sensor Voltage Reference	I	—
5	1	WH	4689	Rear Closure Open/Close Motor Open Control	I	—
6	0.35	BN / YE	4686	Rear Closure Position Sensor Signal 2	I	—
7	0.35	BK / GN	4687	Rear Closure Position Sensor Low Reference	I	—
8	0.35	BU / WH	4685	Rear Closure Position Sensor Signal 1	I	—

P12 Horn



4889830

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33164011
Service Connector: 86802964
Description: 2-Way F 1.5 OCS Series, Sealed(BK)

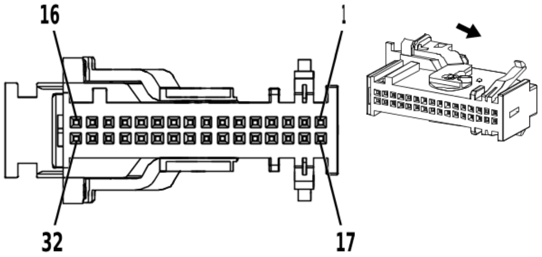
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

P12 Horn

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	250	Ground	I	—
2	0.75	BN / GY	29	Horn Control	I	—

P16 Instrument Cluster X1



627214

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 12198036
Service Connector: 13511333
Description: 32-Way F 0.64 Micro-Quadlock Series(BK with GY Cover)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19300632	J-35616-64B (L-BU)	J-38125-215A

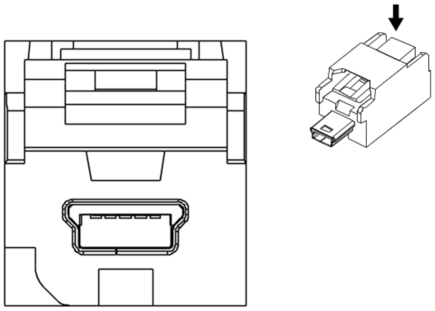
P16 Instrument Cluster X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BN / BU	7216	Ethernet Bus 7 [-]	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	GY / GN	1102	Low Speed GMLAN Serial Data 2	I	—
4 - 6	—	—	—	Not Occupied	—	—
7	0.35	RD / GY	2840	Battery Positive Voltage	I	—
8	0.35	VT / BK	1639	Run/Crank Ignition 1 Voltage	I	—
9	—	—	—	Not Occupied	—	—
10	0.5	BU / YE	68	Low Coolant Level Indicator Control	I	—
11	0.35	GY / BK	4787	Day Night LED Control	I	—
12	0.35	GY / YE	3885	Forward Collision Alert LED Control	I	—
13	0.35	BU / GN	1304	High Speed GMLAN Serial Data [+] 9	I	—
14	0.35	WH / GN	1305	High Speed GMLAN Serial Data [-] 9	I	—
15	—	—	—	Not Occupied	—	—
16	0.35	BN / WH	419	Check Engine Indicator Control	I	—
17	0.35	GY / BU	7217	Ethernet Bus 7 [+]	I	—
18	—	—	—	Not Occupied	—	—
19	0.5	BK / WH	1851	Signal Ground	I	—
20	0.35	GN / BK	3894	Instrument Panel Cluster Control Module LIN Bus 1	I	—
21 - 22	—	—	—	Not Occupied	—	—
23	0.35	WH / BU	5986	Serial Data Communication Enable	I	—
24	0.35	VT	185	Low Washer Fluid Indicator Control	I	—

P16 Instrument Cluster X1 (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
25 - 28	—	—	—	Not Occupied	—	—
29	0.35	BU / GN	1304	High Speed GMLAN Serial Data [+] 9	I	—
30	0.35	WH / GN	1305	High Speed GMLAN Serial Data [-] 9	I	—
31	—	—	—	Not Occupied	—	—
32	0.35	GN / BN	507	Wait To Start Indicator Control	I	—

P16 Instrument Cluster X2



3214018

Connector Part Information

Harness Type: Instrument Panel Wiring Harness USB
OEM Connector: 13893437
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 5-Way M 2.0 Mini-B USB Type(GY)

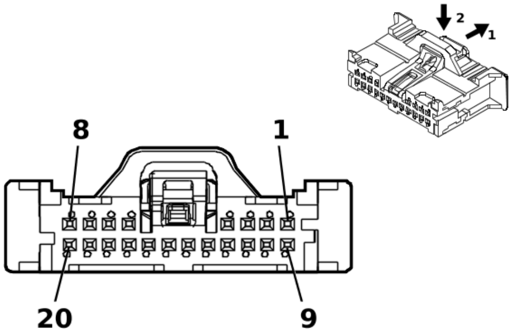
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

P16 Instrument Cluster X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	USB	—	USB Serial Data	I	—

P17 Info Display Module X1 (IOR)



5200955

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35068196
Service Connector: 84769280
Description: 20-Way F Mini 50 Series(BK)

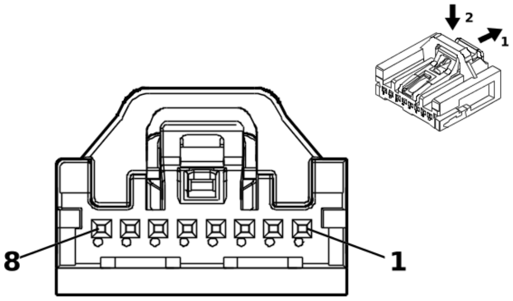
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	84944580	EL-35616-58 (BK)	EL-38125-58

P17 Info Display Module X1 (IOR)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BU / OG	2807	Radio Keypad Voltage Reference	I	—
2	0.35	GY / BU	2803	Radio Display Touch Interrupt Request Signal	I	—
3	—	—	—	Not Occupied	—	—
4	0.35	BU	4315	Radio Volume Up Switch Signal	I	—
5	0.35	BN / GY	4314	Radio Volume Down Switch Signal	I	—
6	0.35	BN / OG	2809	Radio Keypad Power Signal	I	—
7	0.35	WH / VT	2810	Radio Keypad Button Signal	I	—
8	0.35	GY / BU	2808	Radio Keypad Dimming Control	I	—
9	0.35	BU / GN	2813	Radio Display Backlight Dimming Control	I	—
10	—	—	—	Not Occupied	—	—
11	0.35	BK / GN	2804	Radio Display Backlight Low Reference	I	—
12	0.35	BU / RD	2807	Radio Keypad Voltage Reference	I	—
13	—	—	—	Not Occupied	—	—
14	0.35	BU / BK	4315	Radio Volume Up Switch Signal	I	—
15	0.35	GY / BN	4314	Radio Volume Down Switch Signal	I	—
16	0.35	BN / WH	2809	Radio Keypad Power Signal	I	—
17	0.35	VT / WH	2810	Radio Keypad Button Signal	I	—
18	0.35	BU / GY	2808	Radio Keypad Dimming Control	I	—
19	0.35	BU / VT	3363	Navigation Display Dimming Control	I	—
20	0.35	BK / YE	2806	Radio Keypad Low Reference	I	—

P17 Info Display Module X1 (IOS/IOT)



5200269

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35068228
Service Connector: 84769201
Description: 8-Way F Mini 50 Series(BK)

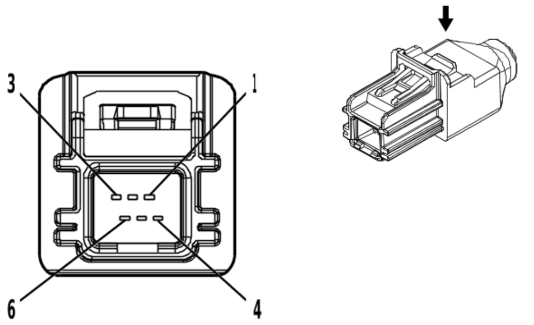
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	EL-35616-58 (BK)	No Tool Required

P17 Info Display Module X1 (IOS/IOT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD / WH	1340	Battery Positive Voltage	I	—
2 - 7	—	—	—	Not Occupied	—	—
8	0.35	BK / WH	2751	Signal Ground	I	—

P17 Info Display Module X2 (IOR+UIJ)



4806625

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: VP000160
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 6-Way M HSAL-2 Series(BK)

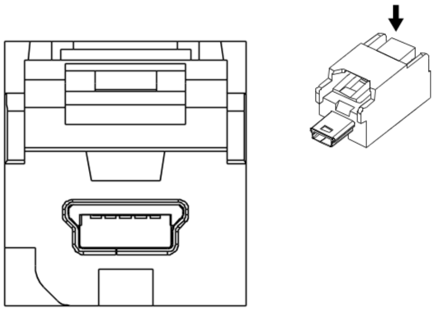
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

P17 Info Display Module X2 (IOR+UIJ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	3365	Navigation Display Low Reference	I	—
2	—	—	3366	Navigation Display Signal [+]	I	—
3	—	—	3367	Navigation Display Signal [-]	I	—
4 - 6	—	—	—	Not Occupied	—	—

P17 Info Display Module X2 (IOR+UIR)


3214018

Connector Part Information

Harness Type: Instrument Panel Wiring Harness USB
OEM Connector: 13871470
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 5-Way M 2.0 Mini-B USB Type(GY)

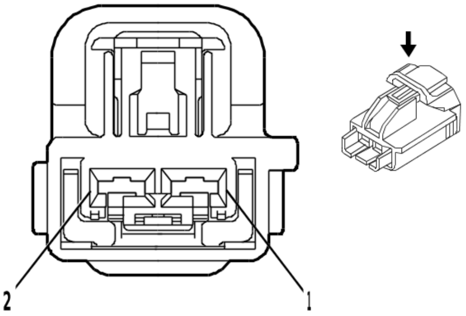
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

P17 Info Display Module X2 (IOR+UIR)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	USB	—	USB Serial Data	I	—

P19AC Speaker - Subwoofer (UQA)



1803142

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 10846819
Service Connector: 19367562
Description: 2-Way F Kaizen Series(L-GY)

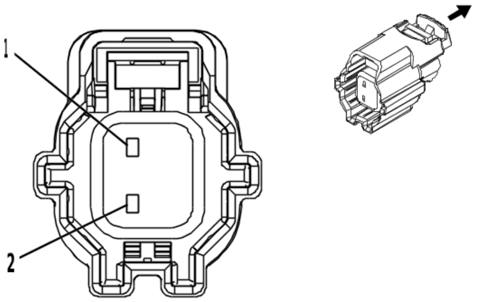
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required

P19AC Speaker - Subwoofer (UQA)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	GN / BK	1794	Left/Rear Subwoofer [-] Control	I	—
2	2.5	BU / GY	346	Left/Rear Subwoofer [+] Control	I	—

P19AG Speaker - Left Front Door



4223204

Connector Part Information

Harness Type: Driver Door Wiring Harness
OEM Connector: 15548606
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.5 MX Series, Sealed(BK)

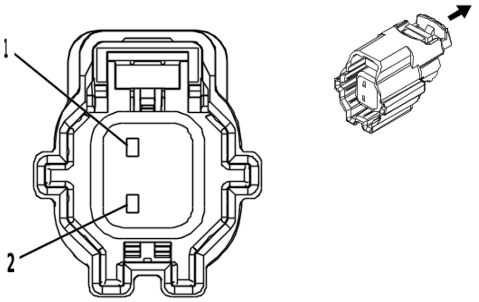
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

P19AG Speaker - Left Front Door

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN / BU	118	Left Front Speaker [-] Control 1	I	—
2	0.75	BU	201	Left Front Speaker 1 [+] Control	I	—

P19AH Speaker - Right Front Door



4223204

Connector Part Information

Harness Type: Passenger Door Wiring Harness
OEM Connector: 15548606
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.5 MX Series, Sealed(BK)

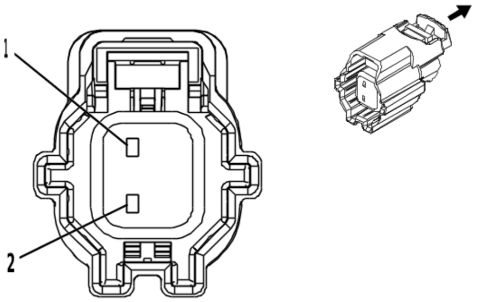
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

P19AH Speaker - Right Front Door

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE / BK	117	Right Front Speaker [-] Control 1	I	—
2	0.75	YE	200	Right Front Speaker 1 [+] Control	I	—

P19AL Speaker - Left Rear Door (UQA/UQF)



4223204

Connector Part Information

Harness Type: Left Rear Door Wiring Harness
OEM Connector: 15548606
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.5 MX Series, Sealed(BK)

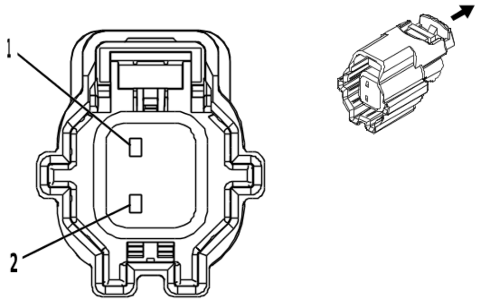
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

P19AL Speaker - Left Rear Door (UQA/UQF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU	116	Left Rear Speaker [-] Control	I	—
2	0.5	GN	199	Left Rear Speaker [+] Control	I	—

P19AM Speaker - Right Rear Door (UQA/UQF)



4223204

Connector Part Information

Harness Type: Right Rear Door Wiring Harness
OEM Connector: 15548606
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.5 MX Series, Sealed(BK)

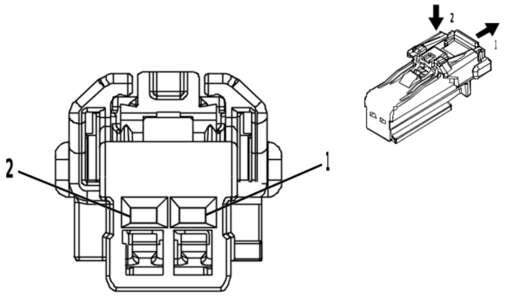
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

P19AM Speaker - Right Rear Door (UQA/UQF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU / BK	115	Right Rear Speaker [-] Control	I	—
2	0.5	WH	46	Right Rear Speaker [+] Control	I	—

P19J Speaker - Left Instrument Panel (UQA)



4373379

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35311601
Service Connector: 19369632
Description: 2-Way F 1.2 MCON Series(GY)

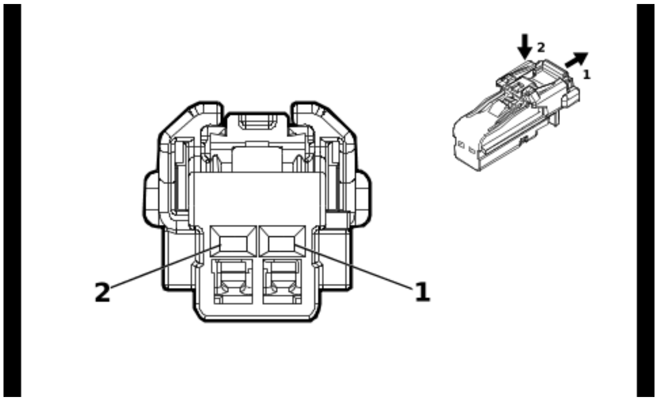
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

P19J Speaker - Left Instrument Panel (UQA)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BU / BN	1957	Left Front Midrange Speaker [-] Control	I	—
2	0.75	BU / VT	1857	Left Front Midrange Speaker [+] Control	I	—

P19J Speaker - Left Instrument Panel (UQF/U95)



4115691

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35311666
Service Connector: 87816612
Description: 2-Way F 1.2 MCON Series(BK)

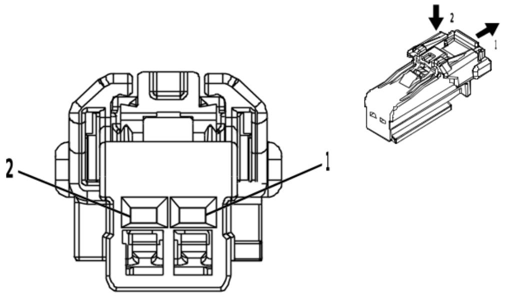
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

P19J Speaker - Left Instrument Panel (UQF/U95)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN / BU	118	Left Front Speaker [-] Control 1	I	—
2	0.75	BU	201	Left Front Speaker 1 [+] Control	I	—

P19W Speaker - Right Instrument Panel (UQA)



4373379

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35311601
Service Connector: 19369632
Description: 2-Way F 1.2 MCON Series(GY)

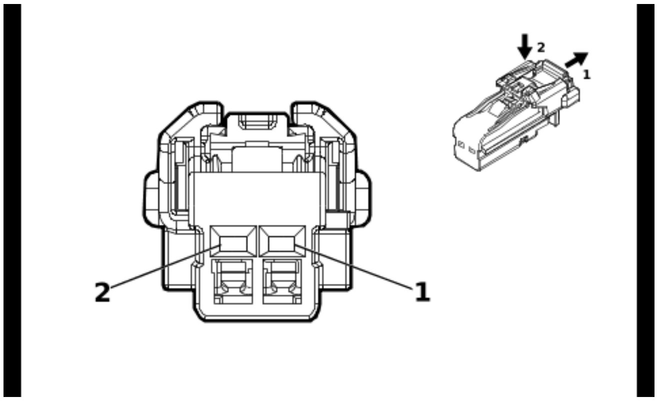
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

P19W Speaker - Right Instrument Panel (UQA)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN / BK	1953	Right Front Midrange Speaker [-] Control	I	—
2	0.75	WH / YE	1853	Right Front Midrange Speaker [+] Control	I	—

P19W Speaker - Right Instrument Panel (UQF/U95)



4115691

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35311666
Service Connector: 87816612
Description: 2-Way F 1.2 MCON Series(BK)

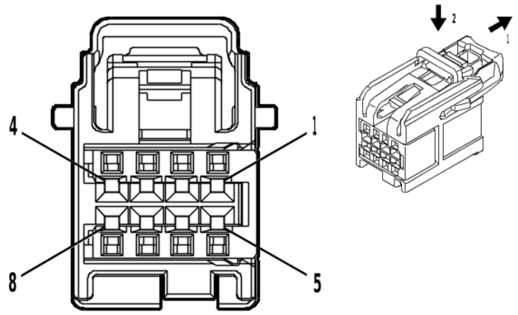
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

P19W Speaker - Right Instrument Panel (UQF/U95)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	YE / BK	117	Right Front Speaker [-] Control 1	I	—
2	0.75	YE	200	Right Front Speaker 1 [+] Control	I	—

P29 Head-Up Display X1 (UV6)



4935776

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 15526972
Service Connector: 19370429
Description: 8-Way F 0.64 OCS Series(BK)

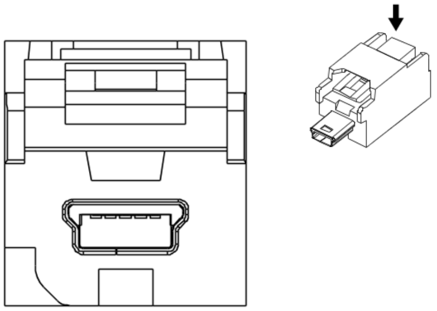
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

P29 Head-Up Display X1 (UV6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN / BK	3894	Instrument Panel Cluster Control Module LIN Bus 1	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	YE / WH	622	Head-Up Display Switch Signal	I	—
4	0.35	BK / WH	1851	Signal Ground	I	—
5	—	—	—	Not Occupied	—	—
6	0.35	RD / WH	1340	Battery Positive Voltage	I	—
7	—	—	—	Not Occupied	—	—
8	0.35	BK / GN	5699	Head-Up Display Switch Low Reference	I	—

P29 Head-Up Display X2 (UV6)



Connector Part Information

Harness Type: Instrument Panel Wiring Harness USB
OEM Connector: 13871470
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 5-Way M 2.0 Mini-B USB Type(GY)

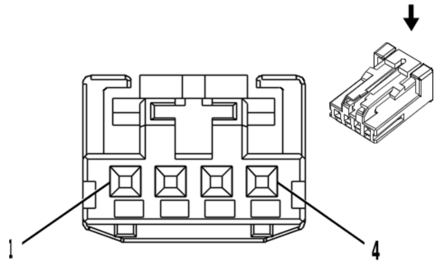
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

P29 Head-Up Display X2 (UV6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	USB	—	USB Serial Data	I	—

P43 Collision Alert Indicators (UEU)



2717162

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 13969166
Service Connector: 19367524
Description: 4-Way F 0.64 Micro-Quadlock Series(BK)

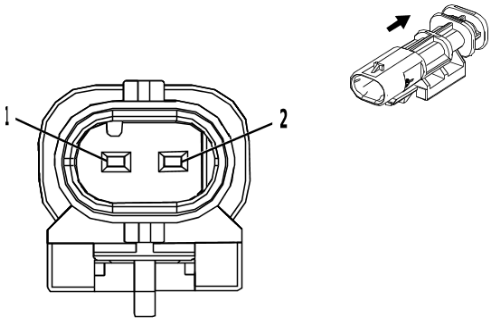
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

P43 Collision Alert Indicators (UEU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	VT / BK	1639	Run/Crank Ignition 1 Voltage	I	—
2	0.35	GY / YE	3885	Forward Collision Alert LED Control	I	—
3	0.35	GY / BK	4787	Day Night LED Control	I	—
4	0.5	BK / WH	1851	Signal Ground	I	—

P45LR Seat Haptic Movement Motor - Driver Left Rear



2474755

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 2203314-1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 MCON Series, Sealed(BK)

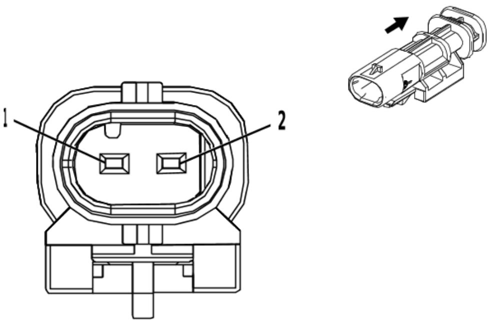
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-13 (BU)	No Tool Required

P45LR Seat Haptic Movement Motor - Driver Left Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	1150	Ground	I	—
2	0.5	YE / BN	3037	Driver Seat Left Rear Haptic Movement Motor Control	I	—

P45RR Seat Haptic Movement Motor - Driver Right Rear



2474755

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 2203314-1
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 MCON Series, Sealed(BK)

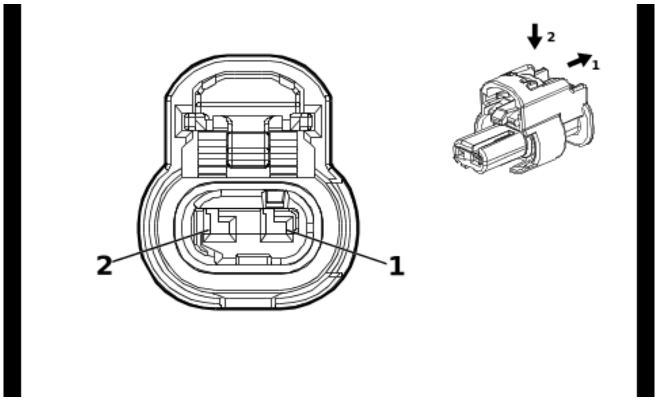
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-13 (BU)	No Tool Required

P45RR Seat Haptic Movement Motor - Driver Right Rear

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK	1150	Ground	I	—
2	0.5	BN	3038	Driver Seat Right Rear Haptic Movement Motor Control	I	—

Q2 A/C Compressor Clutch



4649903

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33327048
Service Connector: 85519075
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

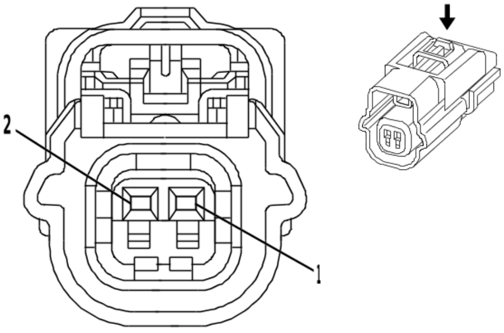
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

Q2 A/C Compressor Clutch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	1.5	BK	4450	Ground	I	L5P
	1	BK	4450	Ground	I	L8T
2	0.5	BN / GN	59	A/C Compressor Clutch Control	I	—

Q6 Camshaft Position Actuator Solenoid Valve (L8T)



1664592

Connector Part Information

Harness Type: Engine Jumper Wiring Harness
OEM Connector: 13528494
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 0.64 Kaizen Series, Sealed(BK)

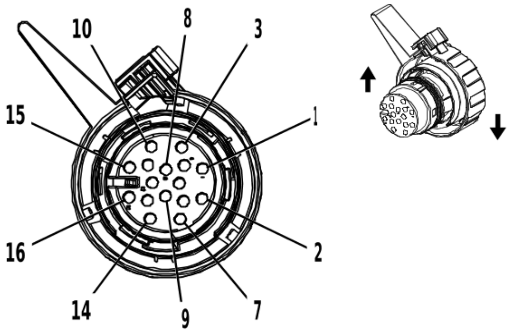
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

Q6 Camshaft Position Actuator Solenoid Valve (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK / BN	6753	Camshaft Position Actuator Solenoid Valve W Low Reference	I	—
2	—	VT / BN	5284	Intake Camshaft Position Actuator Solenoid Valve 1	I	—

Q8 Control Solenoid Valve Assembly (MYD)



3277917

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13878751
Service Connector: 19303772
Description: 16-Way F 1.5 LKS Series, Sealed(BK)

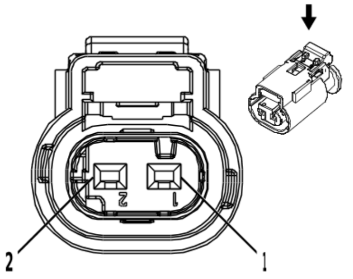
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575237	J-35616-66 (YE)	J-38125-28

Q8 Control Solenoid Valve Assembly (MYD)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	RD / GN	1840	Battery Positive Voltage	I	—
2	1	BK / WH	451	Signal Ground	I	—
3	0.5	WH / GY	1786	Transmission Park/Neutral Signal 1	I	—
4	0.75	RD / GN	1840	Battery Positive Voltage	I	—
5	1	BK / WH	451	Signal Ground	I	—
6 - 8	—	—	—	Not Occupied	—	—
9	0.5	VT / YE	5985	Accessory Wake-Up Serial Data	I	—
10	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	I	—
11	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	I	—
12	0.5	VT / BK	2139	Run/Crank Ignition 1 Voltage	I	—
13	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	I	—
14	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	I	—
15	—	—	—	Not Occupied	—	—
16	0.5	BN / WH	6354	Replicated Transmission Output Speed 128K Signal	I	—

Q12 Evaporative Emission Purge Solenoid Valve (L8T)



2717066

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13735326
Service Connector: 13587326
Description: 2-Way F 1.2 Multilock Series, Sealed(BK)

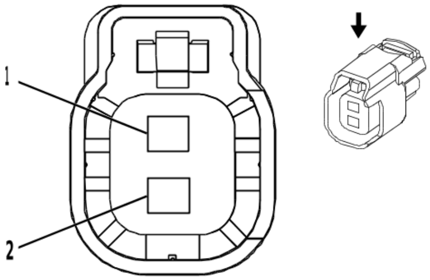
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

Q12 Evaporative Emission Purge Solenoid Valve (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT / BU	5293	Powertrain Main Relay Fused Supply Voltage 4	I	—
2	0.5	GN / BU	428	EVAP Canister Purge Solenoid Control	I	—

Q13 Evaporative Emission Vent Solenoid Valve



2422378

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 13771883
Service Connector: 13579002
Description: 2-Way F 1.5 Series, Sealed(BK)

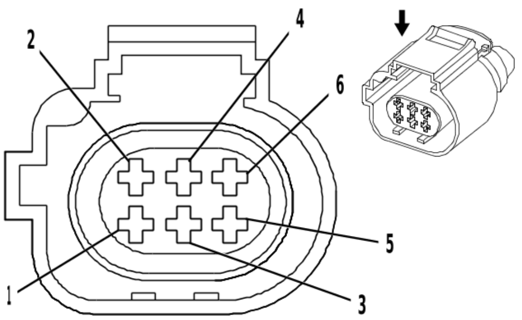
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

Q13 Evaporative Emission Vent Solenoid Valve

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH	1310	EVAP Vent Solenoid Valve Control	I	—
2	0.5	RD / WH	2040	Battery Positive Voltage	I	—

Q14 Exhaust Gas Recirculation Valve



2216905

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 284716-5
Service Connector: 19354082
Description: 6-Way F 1.6 Micro-Timer Series, Sealed(GY)

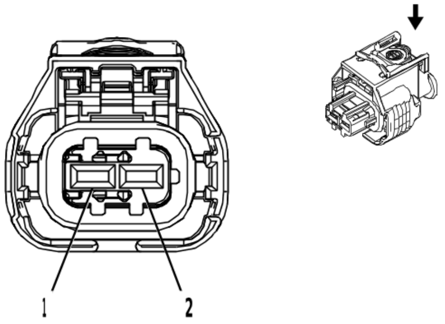
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

Q14 Exhaust Gas Recirculation Valve

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	WH / VT	5764	Exhaust Gas Recirculation Valve High Control	I	L5P
2	0.5	BN / WH	5763	Exhaust Gas Recirculation Position Signal	I	L5P
3	—	—	—	Not Occupied	—	—
4	0.5	BK / BN	2753	Exhaust Gas Recirculation Sensor Low Reference	I	L5P
5	0.5	VT / BK	5746	Exhaust Gas Recirculation Valve Low Control	I	L5P
6	0.5	BU / RD	5047	Exhaust Gas Recirculation Valve Position Sensor 5V Reference 1	I	L5P

Q17A Fuel Injector 1



Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed(BK)

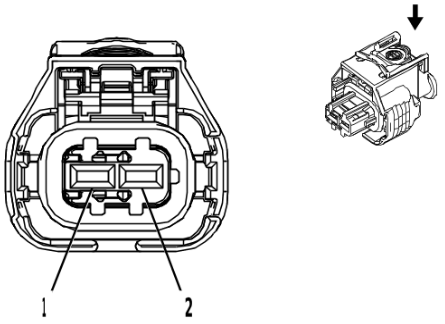
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required
II	Not required	No Tool Required	No Tool Required

Q17A Fuel Injector 1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	— 0.75	BN BN / WH	4801 4901	Direct Fuel Injector High Voltage Control Cylinder 1 Direct Fuel Injector High Voltage Supply Cylinder 1	II I	— L5P
2	— 0.75	BN / WH BN	4901 4801	Direct Fuel Injector High Voltage Supply Cylinder 1 Direct Fuel Injector High Voltage Control Cylinder 1	II I	— L5P

Q17B Fuel Injector 2



2845578

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed(BK)

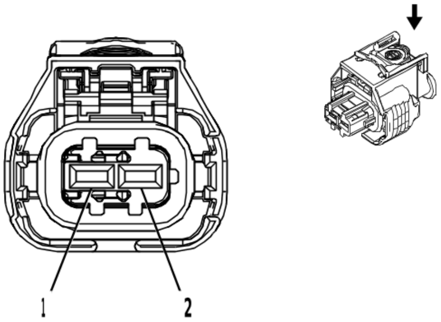
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required
II	Not required	No Tool Required	No Tool Required

Q17B Fuel Injector 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	— 0.75	BU BU / GY	4802 4902	Direct Fuel Injector High Voltage Control Cylinder 2 Direct Fuel Injector High Voltage Supply Cylinder 2	II I	— L5P
2	— 0.75	BU / GY BU	4902 4802	Direct Fuel Injector High Voltage Supply Cylinder 2 Direct Fuel Injector High Voltage Control Cylinder 2	II I	— L5P

Q17C Fuel Injector 3



2845578

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed(BK)

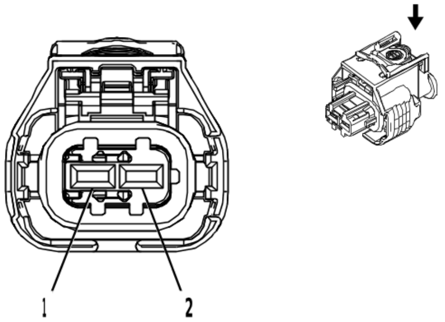
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required
II	Not required	No Tool Required	No Tool Required

Q17C Fuel Injector 3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	— 0.75	GN GN / GY	4803 4903	Direct Fuel Injector High Voltage Control Cylinder 3 Direct Fuel Injector High Voltage Supply Cylinder 3	II I	— L5P
2	— 0.75	GN / GY GN	4903 4803	Direct Fuel Injector High Voltage Supply Cylinder 3 Direct Fuel Injector High Voltage Control Cylinder 3	II I	— L5P

Q17D Fuel Injector 4



2845578

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed(BK)

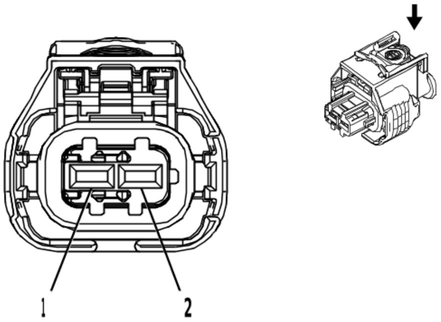
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required
II	Not required	No Tool Required	No Tool Required

Q17D Fuel Injector 4

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	— 0.75	GY / BU BU / WH	4804 4904	Direct Fuel Injector High Voltage Control Cylinder 4 Direct Fuel Injector High Voltage Supply Cylinder 4	II I	— L5P
2	— 0.75	BU / WH GY / BU	4904 4804	Direct Fuel Injector High Voltage Supply Cylinder 4 Direct Fuel Injector High Voltage Control Cylinder 4	II I	— L5P

Q17E Fuel Injector 5



2845578

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed(BK)

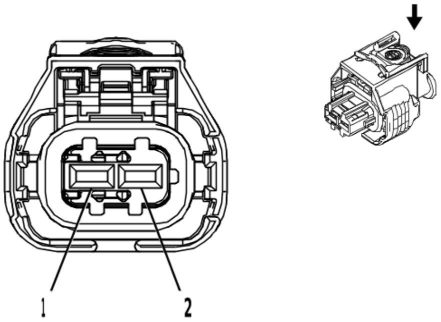
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required
II	Not required	No Tool Required	No Tool Required

Q17E Fuel Injector 5

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	— 0.75	WH / GN GN / WH	4805 4905	Direct Fuel Injector High Voltage Control Cylinder 5 Direct Fuel Injector High Voltage Supply Cylinder 5	II I	— L5P
2	— 0.75	GN / WH WH / GN	4905 4805	Direct Fuel Injector High Voltage Supply Cylinder 5 Direct Fuel Injector High Voltage Control Cylinder 5	II I	— L5P

Q17F Fuel Injector 6



2845578

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed(BK)

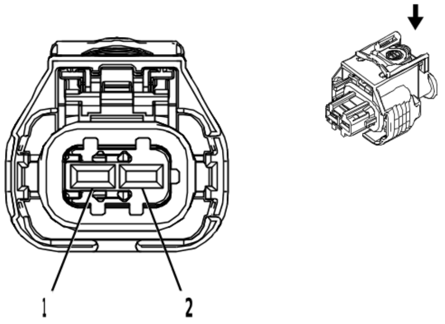
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required
II	Not required	No Tool Required	No Tool Required

Q17F Fuel Injector 6

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	— 0.75	VT / GN VT / GY	4806 4906	Direct Fuel Injector High Voltage Control Cylinder 6 Direct Fuel Injector High Voltage Supply Cylinder 6	II I	— L5P
2	— 0.75	VT / GY VT / GN	4906 4806	Direct Fuel Injector High Voltage Supply Cylinder 6 Direct Fuel Injector High Voltage Control Cylinder 6	II I	— L5P

Q17G Fuel Injector 7



2845578

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed(BK)

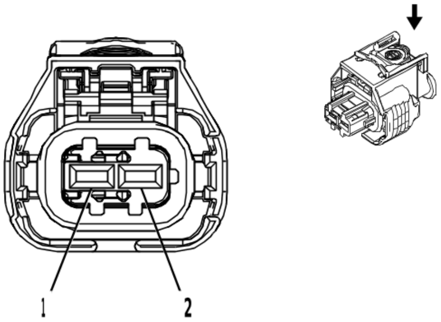
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required
II	Not required	No Tool Required	No Tool Required

Q17G Fuel Injector 7

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	— 0.75	YE / GY WH / YE	4807 4907	Direct Fuel Injector High Voltage Control Cylinder 7 Direct Fuel Injector High Voltage Supply Cylinder 7	II I	— L5P
2	— 0.75	WH / YE YE / GY	4907 4807	Direct Fuel Injector High Voltage Supply Cylinder 7 Direct Fuel Injector High Voltage Control Cylinder 7	II I	— L5P

Q17H Fuel Injector 8



2845578

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13343445
Service Connector: 19368140
Description: 2-Way F 2.8 Series, Sealed(BK)

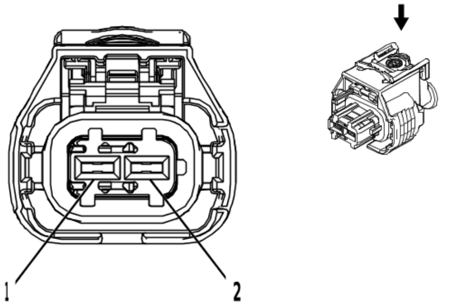
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required
II	Not required	No Tool Required	No Tool Required

Q17H Fuel Injector 8

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	— 0.75	GY GY / WH	4808 4908	Direct Fuel Injector High Voltage Control Cylinder 8 Direct Fuel Injector High Voltage Supply Cylinder 8	II I	— L5P
2	— 0.75	GY / WH GY	4908 4808	Direct Fuel Injector High Voltage Supply Cylinder 8 Direct Fuel Injector High Voltage Control Cylinder 8	II I	— L5P

Q18A Fuel Pressure Regulator 1 (L5P)



2577394

Connector Part Information

Harness Type: Engine Jumper Wiring Harness
OEM Connector: 13343443
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 2.8 Series, Sealed(BK)

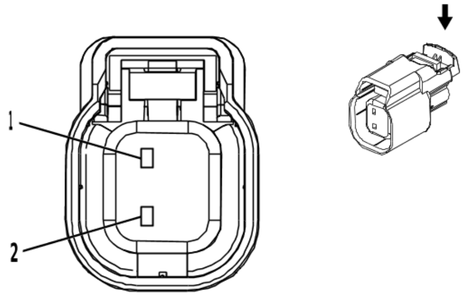
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

Q18A Fuel Pressure Regulator 1 (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN / BK	2929	Fuel Metering Solenoid Valve Low Control	I	L5P
2	0.5	YE	2928	Fuel Metering Solenoid Valve High Control	I	L5P

Q18B Fuel Pressure Regulator 2



2792100

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13581410
Service Connector: 19352068
Description: 2-Way F 1.5 Series, Sealed(BK)

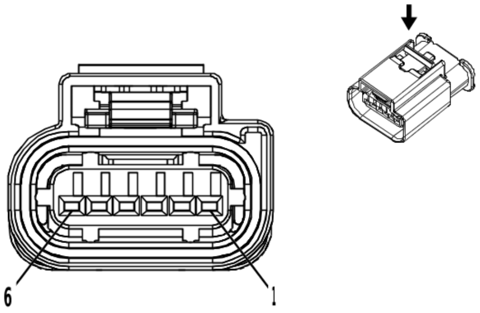
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	No Tool Required	No Tool Required

Q18B Fuel Pressure Regulator 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	— 0.75	BK / YE BU / WH	2834 2530	Fuel Rail Pressure Solenoid Valve Low Reference Fuel Rail Pressure Solenoid Valve Control	II I	— L5P
2	— 0.75	BU / WH BK / YE	2530 2834	Fuel Rail Pressure Solenoid Valve Control Fuel Rail Pressure Solenoid Valve Low Reference	II I	— L5P

Q20 Intake Air Flow Valve



3747579

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13507087
Service Connector: 19352911
Description: 6-Way F 1.2 MCON Series, Sealed(BK)

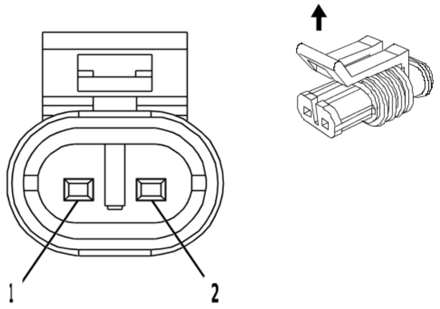
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

Q20 Intake Air Flow Valve

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	581	Throttle Actuator Open Control	I	L5P
2	0.5	BN / WH	582	Throttle Actuator Close Control	I	L5P
3	0.5	BU / WH	3630	Throttle Position Sensor SENT 1 Signal	I	L5P
4	0.5	BK / BN	2752	Throttle Position Sensor Low Reference	I	L5P
5	0.5	BN / RD	2701	Throttle Position Sensor 5V Reference	I	L5P
6	—	—	—	Not Occupied	—	—

Q32P Shift Solenoid Valve - Power Take-Off



2448482

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 15369449
Service Connector: 88988136
Description: 2-Way F 1.5 Series, Sealed(BK)

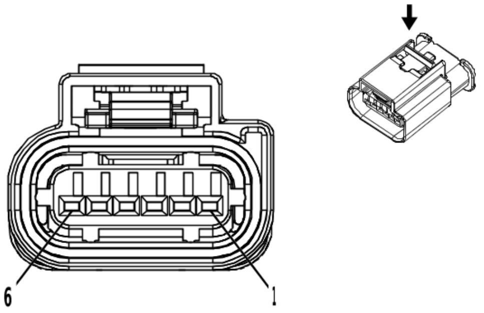
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

Q32P Shift Solenoid Valve - Power Take-Off

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU / WH	8235	Power Take Off Solenoid Control High	I	—
2	0.5	GN / WH	8236	Power Take Off Solenoid Control Low	I	—

Q38 Throttle Body (L8T)



3747579

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33220833
Service Connector: 19352911
Description: 6-Way F 1.2 MCON Series, Sealed(BK)

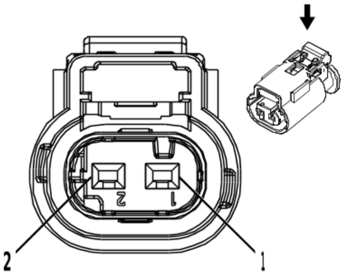
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

Q38 Throttle Body (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE	581	Throttle Actuator Open Control	I	—
2	0.5	BN / WH	582	Throttle Actuator Close Control	I	—
3	0.5	BU / WH	3630	Throttle Position Sensor SENT 1 Signal	I	—
4	0.5	BK / BN	2752	Throttle Position Sensor Low Reference	I	—
5	0.5	BN / RD	2701	Throttle Position Sensor 5V Reference	I	—
6	—	—	—	Not Occupied	—	—

Q44 Engine Oil Pressure Control Solenoid Valve (L8T)



2717066

Connector Part Information

Harness Type: Engine Jumper Wiring Harness
OEM Connector: 13735326
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 Multilock Series, Sealed(BK)

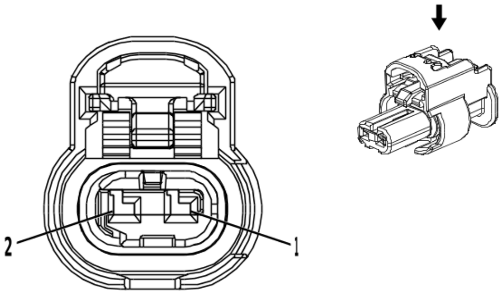
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

Q44 Engine Oil Pressure Control Solenoid Valve (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	VT / BU	5293	Powertrain Main Relay Fused Supply Voltage 4	I	—
2	—	BU	179	Engine Oil Pump Control	I	—

Q46 A/C Compressor Solenoid Valve



4335931

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33371691
Service Connector: 19366843
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

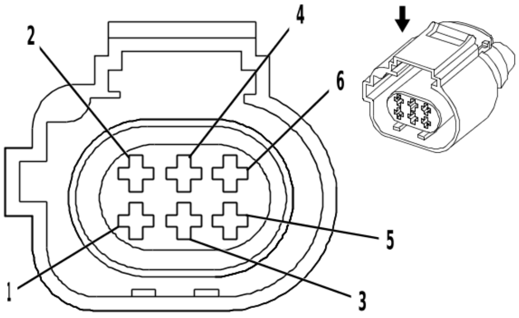
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

Q46 A/C Compressor Solenoid Valve

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU / YE	7574	A/C Compressor Solenoid Valve Control	I	—
2	0.5	BU / BN	7573	A/C Compressor Solenoid Valve Control	I	—

Q47 Exhaust Gas Recirculation Cooler Bypass Solenoid Valve (L5P)



2216905

Connector Part Information

Harness Type: Glow Plug Jumper Wiring Harness
OEM Connector: 284716-5
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 1.6 Micro-Timer Series, Sealed(GY)

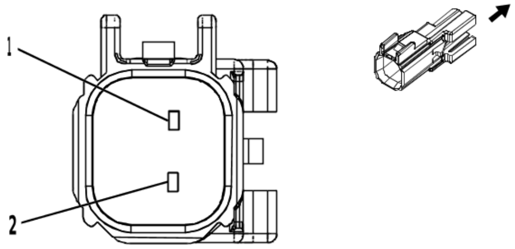
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

Q47 Exhaust Gas Recirculation Cooler Bypass Solenoid Valve (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BN / VT	3656	EGR Cooler Bypass Valve Close Control	I	—
2	—	GN / GY	3654	EGR Cooler Bypass Valve Position Sensor Signal	I	—
3	—	—	—	Not Occupied	—	—
4	—	BK / BU	3653	EGR Cooler Bypass Valve Position Sensor Low Reference	I	—
5	—	YE / GN	3655	EGR Cooler Bypass Valve Open Control	I	—
6	—	VT / RD	3652	EGR Cooler Bypass Valve Position Sensor 5V Reference	I	—

Q61 Reductant Injector (L5P)



3271068

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13719748
Service Connector: 19301583
Description: 2-Way M 1.5 Series, Sealed(BK)

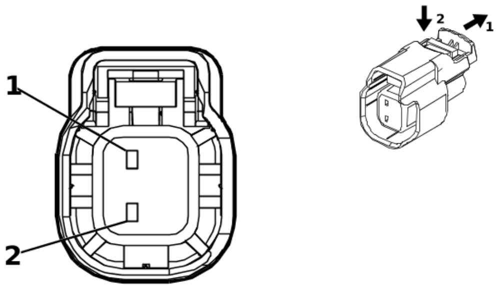
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-3 (GY)	No Tool Required

Q61 Reductant Injector (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BN / WH	3100	Diesel Exhaust Fluid Dosing Valve Low Control	I	—
2	0.75	BN	3099	Diesel Exhaust Fluid Dosing Valve High Control	I	—

Q67 Exhaust Aftertreatment Fuel Injector (L5P)



3028817

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 13820418
Service Connector: 13580230
Description: 2-Way F 1.5 Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

Q67 Exhaust Aftertreatment Fuel Injector (L5P)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN / BU	2926	Exhaust Aftertreatment Fuel Injector High Control	I	—
2	0.5	VT / BN	2927	Exhaust Aftertreatment Fuel Injector Low Control	I	—

Q77A Transmission Control Solenoid Valve 1 (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

Q77A Transmission Control Solenoid Valve 1 (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	WH	6388	Transmission High Side Driver 2 Control	I	—
2	—	BU / GN	6404	Clutch Solenoid Valve E Control	I	—

Q77B Transmission Control Solenoid Valve 2 (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

Q77B Transmission Control Solenoid Valve 2 (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	WH	6388	Transmission High Side Driver 2 Control	I	—
2	—	GN / BN	6403	Clutch Solenoid Valve D Control	I	—

Q77C Transmission Control Solenoid Valve 3 (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

Q77C Transmission Control Solenoid Valve 3 (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	WH	6388	Transmission High Side Driver 2 Control	I	—
2	—	GY	6402	Clutch Solenoid Valve C Control	I	—

Q77D Transmission Control Solenoid Valve 4 (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

Q77D Transmission Control Solenoid Valve 4 (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	WH	6388	Transmission High Side Driver 2 Control	I	—
2	—	BN / WH	4509	Transmission Clutch F Control	I	—

Q77E Transmission Control Solenoid Valve 5 (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

Q77E Transmission Control Solenoid Valve 5 (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	WH	6388	Transmission High Side Driver 2 Control	I	—
2	—	YE / VT	4507	Transmission Clutch H Control	I	—

Q77F Transmission Control Solenoid Valve 6 (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

Q77F Transmission Control Solenoid Valve 6 (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	WH	6388	Transmission High Side Driver 2 Control	I	—
2	—	BU / GY	4508	Transmission Clutch G Control	I	—

Q77G Transmission Control Solenoid Valve 7 (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

Q77G Transmission Control Solenoid Valve 7 (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BN	6387	Transmission High Side Driver 1 Control	I	—
2	—	GN / OG	1530	Transmission Line Pressure Control Solenoid Valve Control	I	—

Q77H Transmission Control Solenoid Valve 8 (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

Q77H Transmission Control Solenoid Valve 8 (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BN	6387	Transmission High Side Driver 1 Control	I	—
2	—	GY / BN	422	Torque Converter Clutch Solenoid Valve Control	I	—

Q77J Transmission Control Solenoid Valve 9 (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

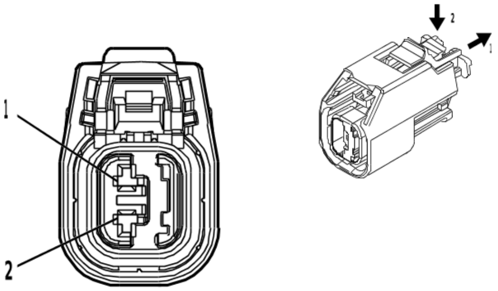
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

Q77J Transmission Control Solenoid Valve 9 (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	WH	6388	Transmission High Side Driver 2 Control	I	—
2	—	VT	7819	Default Disable Solenoid Control	I	—

R6A Terminating Resistor - High Speed Bus



4889830

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33164011
Service Connector: 86802964
Description: 2-Way F 1.5 OCS Series, Sealed(BK)

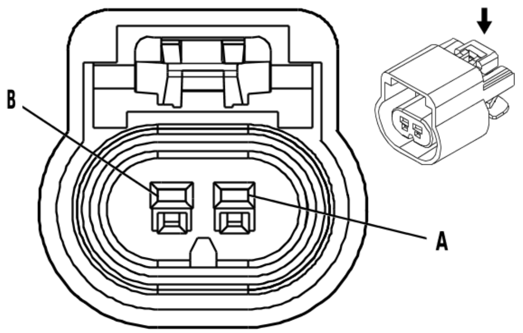
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

R6A Terminating Resistor - High Speed Bus

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU	2500	High Speed GMLAN Serial Data [+] 1	I	—
2	0.5	WH	2501	High Speed GMLAN Serial Data [-] 1	I	—

R6E Terminating Resistor - High Speed Extension Bus 1 (UEU/UHX)



523630

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 13510085
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 150 GT Series, Sealed(BK)

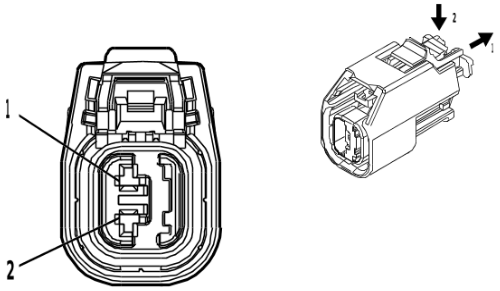
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

R6E Terminating Resistor - High Speed Extension Bus 1 (UEU/UHX)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.35	BU / GY	3935	High Speed GMLAN Serial Data [+] 8	I	—
B	0.35	WH / GY	3936	High Speed GMLAN Serial Data [-] 8	I	—

R6F Terminating Resistor - High Speed Extension Bus 2



4889830

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33164011
Service Connector: 86802964
Description: 2-Way F 1.5 OCS Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

R6F Terminating Resistor - High Speed Extension Bus 2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU / GN	1304	High Speed GMLAN Serial Data [+] 9	I	—
2	0.5	WH / GN	1305	High Speed GMLAN Serial Data [-] 9	I	—

R12 Power Take-Off Switch Diode (PTO)

—

Connector Part Information

Harness Type: Power Take-Off Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

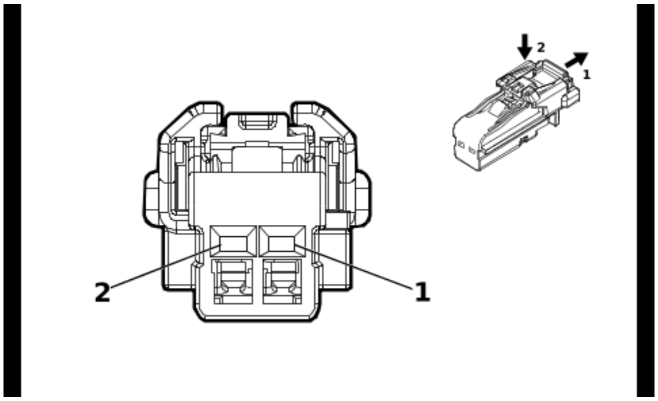
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

R12 Power Take-Off Switch Diode (PTO)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	BU / BN	4408	Power Take-Off Enable Signal	I	—
B	—	BN / WH	6085	Power Take-Off Remote Engine Start Switch Signal	I	—

S2 Transmission Manual Shift Switch



4115691

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35311666
Service Connector: 87816612
Description: 2-Way F 1.2 MCON Series(BK)

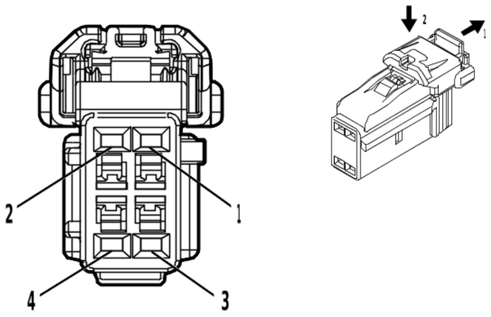
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

S2 Transmission Manual Shift Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT / YE	5526	Tap Up/Tap Down Switch Signal	I	—
2	0.5	BK / WH	1851	Signal Ground	I	—

S3 Transmission Shift Lever



4872683

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35029308
Service Connector: 19369633
Description: 4-Way F 1.2 Series(BK)

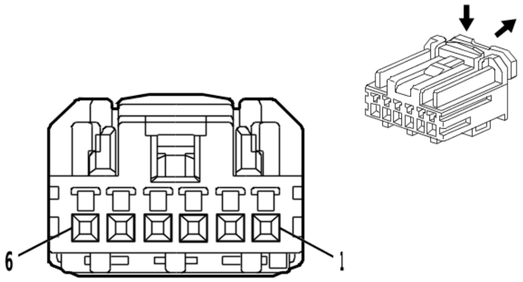
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

S3 Transmission Shift Lever

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE / WH	816	Brake Transmission Shift Interlock Solenoid Actuator Control	I	—
2	0.35	BK	1850	Ground	I	—
3	0.35	GN / WH	1932	Shift Select Switch Park Signal	I	—
4	0.35	BK	1850	Ground	I	—

S13D Door Lock Switch - Driver (AU3)



4650256

Connector Part Information

Harness Type: Driver Door Trim Wiring Harness
OEM Connector: 33315784
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 HCM Series(BK)

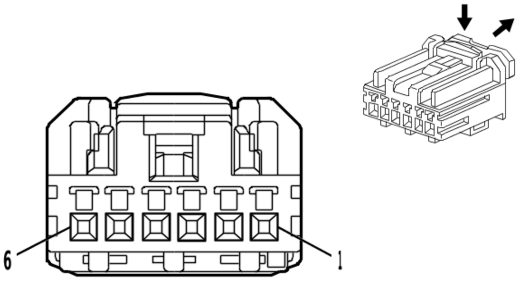
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	J-35616-64B (L-BU)	No Tool Required

S13D Door Lock Switch - Driver (AU3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
2	0.5	BN / YE	780	Driver Door Lock Switch Lock Signal	II	—
3	0.35	BN / WH	781	Driver Door Lock Switch Unlock Signal	I	—
4	0.35	BK	1150	Ground	I	—
5 - 6	—	—	—	Not Occupied	—	—

S13P Door Lock Switch - Passenger (AU3)



4650256

Connector Part Information

Harness Type: Passenger Door Trim Wiring Harness
OEM Connector: 33315784
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 HCM Series(BK)

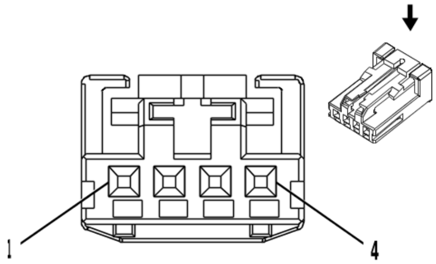
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required

S13P Door Lock Switch - Passenger (AU3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
2	0.35	YE / VT	244	Passenger Door Lock Switch Lock Control	I	—
3	0.35	BN / VT	245	Passenger Door Lock Switch Unlock Control	I	—
4	0.35	BK	1250	Ground	I	—
5 - 6	—	—	—	Not Occupied	—	—

S27 Head-Up Display Switch (UV6)



2717162

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 13969166
Service Connector: 19367524
Description: 4-Way F 0.64 Micro-Quadlock Series(BK)

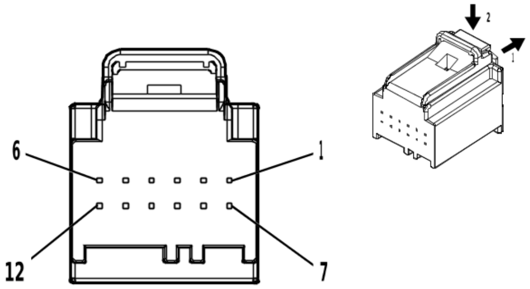
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

S27 Head-Up Display Switch (UV6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
2	0.35	BK	1850	Ground	I	—
3	0.35	BK / GN	5699	Head-Up Display Switch Low Reference	I	—
4	0.35	YE / WH	622	Head-Up Display Switch Signal	I	—

S30 Headlamp Switch



5095565

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35130710
Service Connector: 13525987
Description: 12-Way F 0.64 Series(BK)

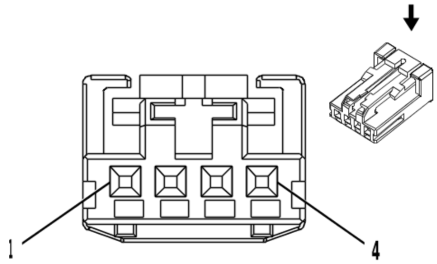
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13584547	J-35616-64B (L-BU)	J-38125-215A

S30 Headlamp Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH / VT	103	Headlamp Switch On Signal	I	—
2	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
3	0.35	GN / BN	306	Headlamp Switch Off Signal	I	—
4	0.35	GY	158	Cargo Lamp Switch Signal	I	—
5	0.35	GN / GY	13	Headlamp Switch Park Lamp Signal	I	—
6	0.5	WH / VT	1430	Exterior Courtesy Lamp Control	I	—
7	0.35	WH / GY	2935	Task Lamp Switch Signal	I	—
8	0.35	BK / WH	1851	Signal Ground	I	—
9 - 10	—	—	—	Not Occupied	—	—
11	0.35	WH / BN	7555	Headlamp Switch Signal	I	—
12	0.35	YE	7556	Headlamp Switch Reference	I	—

S32R Seat Heating Switch - Rear (KA6)



2717162

Connector Part Information

Harness Type: Front Floor Console Wiring Harness
OEM Connector: 13969166
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64 Micro-Quadlock Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

S32R Seat Heating Switch - Rear (KA6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD / WH	1340	Battery Positive Voltage	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	GN / WH	4115	Body Control Module LIN Bus 5	I	—
4	0.5	BK	1250	Ground	I	—

S33 Horn Switch

—

Connector Part Information

Harness Type: Steering Wheel Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

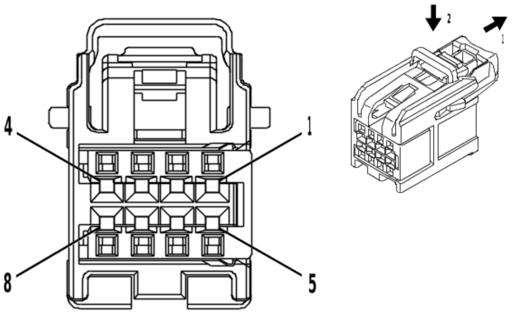
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

S33 Horn Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK / WH	1851	Signal Ground	I	—
2	—	GN / WH	3287	Horn Switch Signal	I	—

S38 Ignition Mode Switch (BTM)



4232228

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 15526973
Service Connector: 19353873
Description: 8-Way F 0.64 OCS Series(GY)

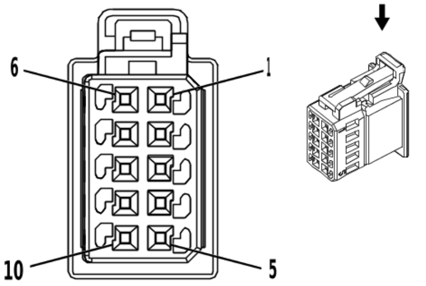
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

S38 Ignition Mode Switch (BTM)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BU / BK	5719	Ignition Mode Switch Start LED Signal	I	—
2	0.35	BN / BK	5720	Ignition Mode Switch Accessory LED Signal	I	—
3	0.35	BK / WH	1851	Signal Ground	I	—
4	0.35	BU / GN	5723	Ignition Mode Switch Mode Voltage	I	—
5	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
6	—	—	—	Not Occupied	—	—
7	0.35	BK / GY	3559	Passive Start Switch 2 Low Reference	I	—
8	0.35	GN / BK	3558	Passive Start Switch Signal 2	I	—

S39 Ignition Switch (-BTM)



2830955

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 13650061
Service Connector: 19299776
Description: 10-Way F 0.64 Micro-Quadlock Series(BK)

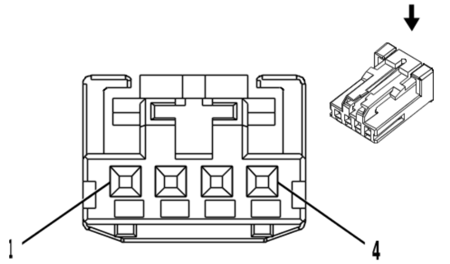
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19300632	J-35616-64B (L-BU)	J-38125-215A

S39 Ignition Switch (-BTM)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5 0.5	WH / GN WH / BK	663 1073	Hazard Switch Left Turn Signal Ignition Key Resistor Signal	I I	BTM - BTM
2	0.5 0.5	WH / VT WH / VT	664 1020	Hazard Switch Right Turn Signal Off/Run/Crank Ignition Voltage	I I	BTM - BTM
3	0.5 0.35	BK / WH VT / YE	1851 4	Signal Ground Accessory Ignition Voltage	I I	BTM - BTM
4	0.5 0.35	WH / GY RD / BU	3849 540	Automatic High Beam On/Off Switch Signal Battery Positive Voltage	I I	BTM - BTM
5	0.35 0.35	WH / BK VT / BK	94 3	Windshield Washer Switch Signal Run/Crank Ignition 1 Voltage	I I	BTM - BTM
6	0.5 0.5	YE / BN WH / VT	307 1020	Headlamp Switch Flash Signal Off/Run/Crank Ignition Voltage	I I	BTM - BTM
7	0.5	WH	524	High Beam Select Switch High Beam Signal	I	—
8	0.5	BK / GY	6009	Windshield Wiper Switch Low Reference	I	—
9	0.5	GY	1715	Windshield Wiper Switch High Signal	I	—
10	0.5	YE / BU	1714	Windshield Wiper Switch Low Signal	I	—

S47D Seat Memory Switch - Driver (A45)



2717162

Connector Part Information

Harness Type: Driver Door Trim Wiring Harness
OEM Connector: 13969166
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way F 0.64 Micro-Quadlock Series(BK)

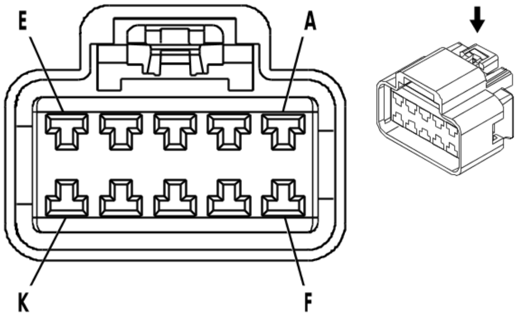
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

S47D Seat Memory Switch - Driver (A45)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
2	0.35	BK / BU	5978	Memory Switch Low Reference	I	—
3	0.35	WH	615	Seat Memory Switch Signal 1	I	—
4	0.35	BU / GN	614	Seat Memory Switch Set Signal	I	—

S64D Seat Adjuster Switch - Driver



623046

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 15326931
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 280 GT Series(BK)

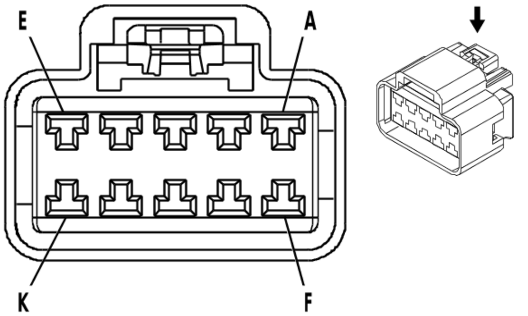
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required

S64D Seat Adjuster Switch - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.5 1.5	GN / BN GN / BN	1518 286	Seat Front Vertical Up Switch Signal Driver Seat Front Vertical Motor Up Control	I I	A45 - A45
B	2.5	BK	1150	Ground	I	—
C	0.5 1.5	GY / GN GY / GN	1523 284	Seat Horizontal Rearward Switch Signal Driver Seat Horizontal Motor Rearward Control	I I	A45 - A45
D	0.5 1.5	YE / BN YE / BU	1522 285	Seat Horizontal Forward Switch Signal Driver Seat Horizontal Motor Forward Control	I I	A45 - A45
E	0.5 2.5	BK RD / YE	1150 5040	Ground Battery Positive Voltage	I I	A45 - A45
F	0.5 1.5	YE YE	1519 282	Seat Rear Vertical Up Switch Signal Driver Seat Rear Vertical Motor Up Control	I I	A45 - A45
G	0.5 1.5	GN / GY BU / YE	1270 277	Seat Recline Rearward Switch Signal Driver Seat Recline Motor Rearward Control	I I	A45 - A45
H	0.5 1.5	GY / BK GN / YE	1269 276	Seat Recline Forward Switch Signal Driver Seat Recline Motor Forward Control	I I	A45 - A45
J	0.5 1.5	YE / BU GY / BU	1521 283	Seat Rear Vertical Down Switch Signal Driver Seat Rear Vertical Motor Down Control	I I	A45 - A45
K	0.5 1.5	BU / VT BU / VT	1520 287	Seat Front Vertical Down Switch Signal Driver Seat Front Vertical Motor Down Control	I I	A45 - A45

S64P Seat Adjuster Switch - Passenger (A7K)



623046

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 15326931
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 280 GT Series(BK)

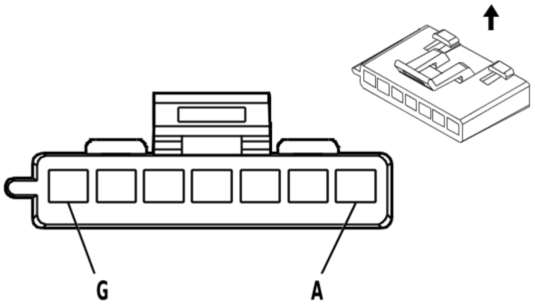
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required

S64P Seat Adjuster Switch - Passenger (A7K)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	GN / BU	298	Passenger Seat Front Vertical Motor Down Control	I	—
B	2.5	BK	1250	Ground	I	—
C	1.5	YE / BU	290	Passenger Seat Horizontal Motor Rearward Control	I	—
D	1.5	YE / WH	296	Passenger Seat Horizontal Motor Forward Control	I	—
E	2.5	RD / BN	1440	Battery Positive Voltage	I	—
F	1.5	BU / WH	289	Passenger Seat Rear Vertical Motor Down Control	I	—
G	1.5	BU / BN	77	Passenger Seat Recline Motor Rearward Control	I	—
H	1.5	GN	76	Passenger Seat Recline Motor Forward Control	I	—
J	1.5	GN / WH	288	Passenger Seat Rear Vertical Motor Up Control	I	—
K	1.5	GN / VT	297	Passenger Seat Front Vertical Motor Up Control	I	—

S65D Seat Lumbar Support Switch - Driver



73146

Connector Part Information

Harness Type: Driver Seat Wiring Harness
OEM Connector: 12052854
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way F 280 Metri-Pack Series(BK)

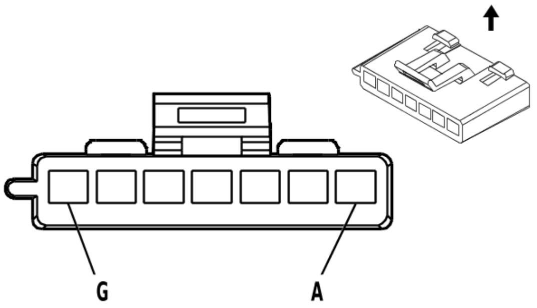
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required

S65D Seat Lumbar Support Switch - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	—	—	Not Occupied	—	—
B	0.75	VT	610	Driver Seat Lumbar Support Motor Backward Control	I	—
C	0.75	BU	611	Driver Seat Lumbar Support Motor Forward Control	I	—
D	—	—	—	Not Occupied	—	—
E	0.75	BK	1150	Ground	I	—
F	—	—	—	Not Occupied	—	—
G	0.75	RD / YE	8840	Battery Positive Voltage	I	—

S65P Seat Lumbar Support Switch - Passenger (A7K)



73146

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 12052854
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way F 280 Metri-Pack Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required

S65P Seat Lumbar Support Switch - Passenger (A7K)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	—	—	—	Not Occupied	—	—
B	0.75	VT	210	Passenger Seat Lumbar Support Motor Backward Control	I	—
C	0.75	BU	211	Passenger Seat Lumbar Support Motor Forward Control	I	—
D	—	—	—	Not Occupied	—	—
E	0.75	BK	1250	Ground	I	—
F	—	—	—	Not Occupied	—	—
G	0.75	RD / YE	8840	Battery Positive Voltage	I	—

S70E Steering Wheel Controls Switch - Radio Presets (UK3)

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Connector Part Information

Harness Type: Steering Wheel Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

S70E Steering Wheel Controls Switch - Radio Presets (UK3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	— —	BK / WH BK / WH	1851 1850	Signal Ground Ground	I I	UK3 - UK3
2	—	WH / YE	4313	Radio Favorite Forward Switch Signal	I	—
3	—	YE / BU	4312	Radio Favorite Back Switch Signal	I	—

S70F Steering Wheel Controls Switch - Radio Volume (UK3)

—

Connector Part Information

Harness Type: Steering Wheel Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

S70F Steering Wheel Controls Switch - Radio Volume (UK3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK / WH	1851	Signal Ground	I	UK3
2	—	GY / BN	4314	Radio Volume Down Switch Signal	I	—
3	—	BU	4315	Radio Volume Up Switch Signal	I	—

S70L Steering Wheel Controls Switch - Left (UK3)

—

Connector Part Information

Harness Type: Steering Wheel Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

S70L Steering Wheel Controls Switch - Left (UK3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	RD / YE	3040	Battery Positive Voltage	I	—
2	— —	YE / BK YE	3893 6817	Steering Wheel LED Backlight Dimming Control LED Backlight Dimming Control 1	I I	UK3 - UK3
3	—	BN / GN	1884	Cruise Control Set/Coast/Resume/Accelerate Switch Signal	I	—
4	—	GY / GN	5737	Distance Sensing Cruise Control Gap Up/Down Switch Signal	I	UEU
6	—	BK / WH	1851	Signal Ground	I	—
7	—	BN / WH	5884	Steering Wheel Heating Switch LED Control	I	—
8	—	YE / GY	5883	Steering Wheel Heating Switch Signal	I	—
10	— —	WH / RD BU	1444 1444	12V Reference 12V Reference	I I	K34 UEU

S70R Steering Wheel Controls Switch - Right (UK3)

—

Connector Part Information

Harness Type: Steering Wheel Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way

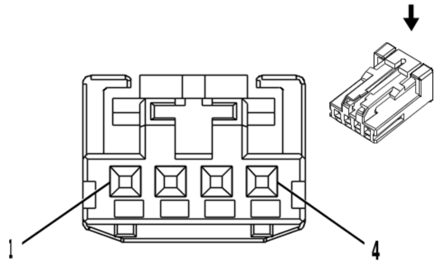
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

S70R Steering Wheel Controls Switch - Right (UK3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	RD / YE	3040	Battery Positive Voltage	I	—
2	—	PK	3893	Steering Wheel LED Backlight Dimming Control	I	—
3	—	BK / BU	3894	Instrument Panel Cluster Control Module LIN Bus 1	I	—
6	—	BK / WH	1851	Signal Ground	I	UK3
7	—	WH / YE	4313	Radio Favorite Forward Switch Signal	I	—
8	—	YE / BU	4312	Radio Favorite Back Switch Signal	I	—
10	—	BU	4315	Radio Volume Up Switch Signal	I	—
11	—	GY / BN	4314	Radio Volume Down Switch Signal	I	—

S76 Trailer Brake Control Switch



2717162

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 13969166
Service Connector: 19367524
Description: 4-Way F 0.64 Micro-Quadlock Series(BK)

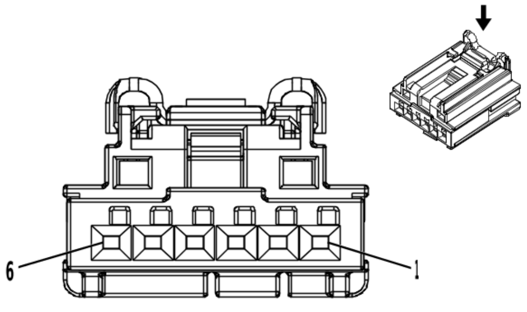
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

S76 Trailer Brake Control Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD / GN	5140	Battery Positive Voltage	I	—
2	0.35	GN / VT	4114	Chassis Control Module LIN Bus 1	I	—
3	0.35	BK / WH	1851	Signal Ground	I	—
4	—	—	—	Not Occupied	—	—

S78 Turn Signal/Multifunction Switch



3960313

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 13920633
Service Connector: 19332786
Description: 6-Way F 0.64 Generation Y Series(BK)

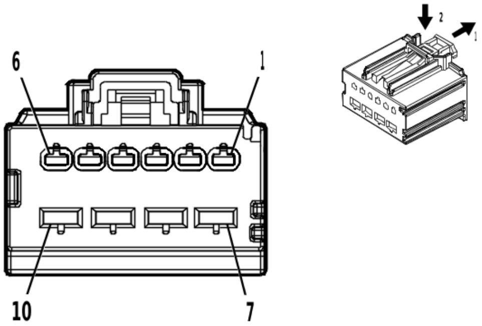
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

S78 Turn Signal/Multifunction Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH / BK	1073	Ignition Key Resistor Signal	I	—
2	0.5	WH / VT	1020	Off/Run/Crank Ignition Voltage	I	—
3	0.35	VT / YE	4	Accessory Ignition Voltage	I	—
4	0.35	RD / BU	540	Battery Positive Voltage	I	—
5	0.35	VT / BK	3	Run/Crank Ignition 1 Voltage	I	—
6	0.5	WH / VT	1020	Off/Run/Crank Ignition Voltage	I	—

S79LR Window Switch - Left Rear (AEQ)



5035058

Connector Part Information

Harness Type: Left Rear Door Wiring Harness
OEM Connector: 35152553
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 1.5, 2.8 MX Series(BK)

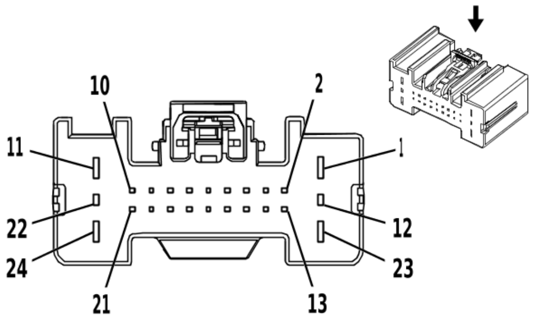
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required

S79LR Window Switch - Left Rear (AEQ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN / GY	6135	Body Control Module LIN Bus 4	I	—
2	0.5	GY	747	Left Rear Door Ajar Switch Signal	I	—
3	0.75	BK	1150	Ground	I	—
4 - 6	—	—	—	Not Occupied	—	—
7	2.5	BK	1150	Ground	II	—
8	2.5	RD / BU	1842	Battery Positive Voltage	II	—
9	2	BU / VT	668	Left Rear Window Motor Up Control	II	—
10	2	YE / BU	669	Left Rear Window Motor Down Control	II	—

S79P Window Switch - Passenger (A45+AEF)



Connector Part Information

Harness Type: Passenger Door Trim Wiring Harness
OEM Connector: 13706537
Service Connector: Service by Harness - See Part Catalog
Description: 24-Way F 0.64 GEN-Y, 1.5, 2.8 YESC Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required
III	Not required	J-35616-64B (L-BU)	No Tool Required

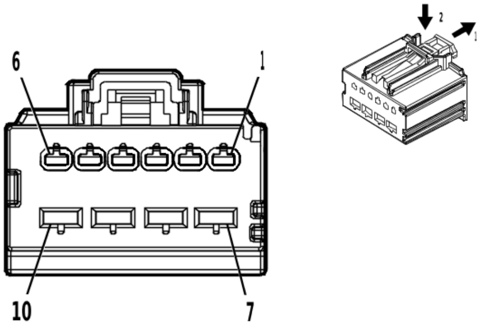
S79P Window Switch - Passenger (A45+AEF)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	YE / WH	5004	Right Outside Rearview Mirror Folding Motor Unfold Control	II	—
2	—	—	—	Not Occupied	—	—
3	0.35	GN / BK	3396	Passenger Outside Rearview Mirror Motor Right [+] Left [-] Control	III	—
4	0.35	YE / VT	3397	Passenger Outside Rearview Mirror Motor Up [+] Down [-] Control	III	—
5	0.35	WH	3398	Passenger Outside Rearview Mirror Motor Common Control	III	—
6	0.35	YE / RD	3399	Passenger Outside Rearview Mirror Position Sensor Voltage Reference	III	—
7	0.35	BU / YE	3401	Passenger Outside Rearview Mirror Position Sensor Up [+] Down [-] Signal	III	—
8	0.35	BK / GN	3400	Passenger Outside Rearview Mirror Position Sensor Low Reference	III	—
9	0.35	VT / WH	3403	Passenger Outside Rearview Mirror Position Sensor Left [-] Right [+] Signal	III	—
10	0.35	YE	6817	LED Backlight Dimming Control 1	III	—
11	0.5	BU / GY	5023	Right Outside Rearview Mirror Folding Motor Fold Control	II	—
12	0.5	BU / GY	3414	Passenger Outside Rearview Mirror Motor Fold Control	I	—
13	—	—	—	Not Occupied	—	—

S79P Window Switch - Passenger (A45+AEF) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
14	0.35	BN / YE	3385	Window Switch Passenger Down Signal	III	—
15	0.35	VT / GY	3386	Window Switch Passenger Express Signal	III	—
16	0.35	YE / BK	3384	Window Switch Passenger Up Signal	III	—
17 - 20	—	—	—	Not Occupied	—	—
21	0.35	GN / WH	7530	Driver Seat Adjuster Memory Module LIN Bus 1	III	—
22	0.5	YE / WH	3413	Passenger Outside Rearview Mirror Motor Unfold Control	I	—
23	2.5	RD / WH	1340	Battery Positive Voltage	II	—
24	2.5	BK	1250	Ground	II	—

S79P Window Switch - Passenger (AED)



5035058

Connector Part Information

Harness Type: Passenger Door Trim Wiring Harness
OEM Connector: 35152553
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 1.5, 2.8 MX Series(BK)

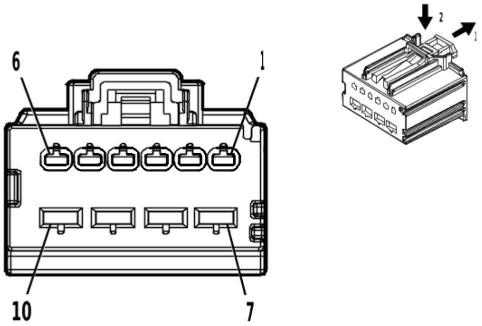
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required

S79P Window Switch - Passenger (AED)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN / YE	6134	Body Control Module LIN Bus 3	I	—
2	0.35	GY	746	Right Front Door Ajar Switch Signal	I	—
3 - 6	—	—	—	Not Occupied	—	—
7	2.5	BK	1250	Ground	II	—
8	2.5	RD / WH	1340	Battery Positive Voltage	II	—
9	2.5	GN / GY	3387	Passenger Window Motor Up Control	II	—
10	2.5	YE / BU	3388	Passenger Window Motor Down Control	II	—

S79RR Window Switch - Right Rear (AEQ)



5035058

Connector Part Information

Harness Type: Right Rear Door Wiring Harness
OEM Connector: 35152553
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 1.5, 2.8 MX Series(BK)

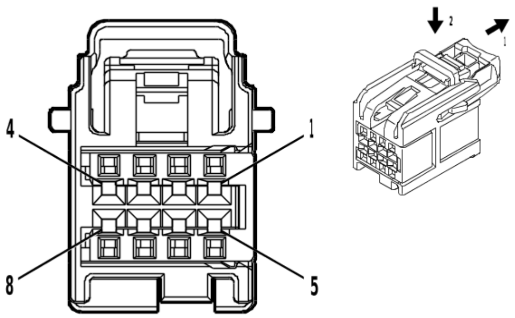
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required

S79RR Window Switch - Right Rear (AEQ)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN / GY	6135	Body Control Module LIN Bus 4	I	—
2	0.5	GN	748	Right Rear Door Ajar Switch Signal	I	—
3 - 6	—	—	—	Not Occupied	—	—
7	2.5	BK	1250	Ground	II	—
8	2.5	RD / WH	1340	Battery Positive Voltage	II	—
9	2	BU / GY	670	Right Rear Window Motor Up Control	II	—
10	2	GN / BK	671	Right Rear Window Motor Down Control	II	—

S86 Vehicle Stability Control Switch



4935776

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 15526972
Service Connector: 19370429
Description: 8-Way F 0.64 OCS Series(BK)

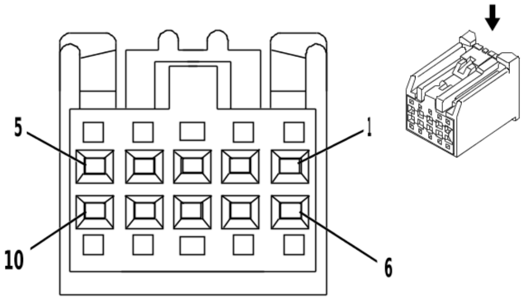
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

S86 Vehicle Stability Control Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BU / VT	1788	Traction Control Switch Signal 1	I	—
2	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
3	0.35	BN	7291	Major Endgate Release Switch Signal Interior	I	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.5	BK	1050	Ground	I	—
7	0.35	GN / WH	111	Hazard Warning Switch Signal	I	—
8	0.35	GY	1198	Endgate Release Switch Analog Signal Interior	I	—

S91 Park Brake Control Switch



2180211

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 13815336
Service Connector: 13577390
Description: 10-Way F 0.64 Kaizen Series(BK)

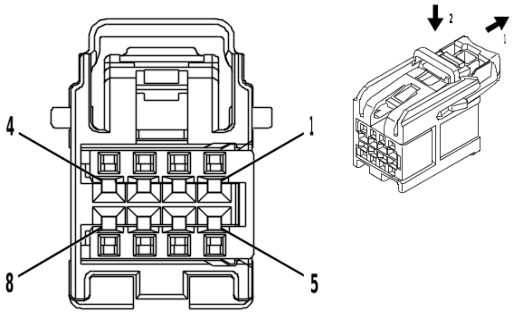
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575742	J-35616-64B (L-BU)	J-38125-215A

S91 Park Brake Control Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BU / VT	1134	Park Brake Switch Signal	I	—
2	0.35	BU / BK	2416	Park Brake Switch Monitor Signal 1	I	—
3	0.35	GY / RD	2414	Park Brake Switch Voltage Reference 1	I	—
4	0.35	YE / RD	2415	Park Brake Switch Voltage Reference 2	I	—
5	0.35	BN	2417	Park Brake Switch Monitor Signal 2	I	—
6	0.35	YE	2418	Park Brake Switch Test Signal	I	—
7	—	—	—	Not Occupied	—	—
8	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
9	—	—	—	Not Occupied	—	—
10	0.35	BK / WH	1851	Signal Ground	I	—

S126 Drive Mode Select Switch (URC)



4232228

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 15526973
Service Connector: 19353873
Description: 8-Way F 0.64 OCS Series(GY)

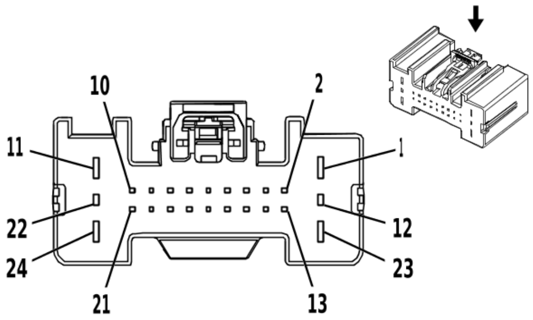
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

S126 Drive Mode Select Switch (URC)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	WH / BN	2203	Enhanced Driver Mode 2 Switch Signal	I	—
2	0.35	GY	4109	Driver Mode Switch 5V Reference	I	—
3	0.35	BK / GY	2204	Enhanced Driver Mode 1 Switch Low Reference	I	—
4	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
5	0.35	BK	1850	Ground	I	—
6	0.35	VT / BN	300	Run Ignition 3 Voltage	I	—
7	0.35	BN	1560	Neutral Indicator Control	I	—
8	—	—	—	Not Occupied	—	—

S146 Window/Outside Rearview Mirror Switch - Driver



2871905

Connector Part Information

Harness Type: Driver Door Trim Wiring Harness
OEM Connector: 13706537
Service Connector: Service by Harness - See Part Catalog
Description: 24-Way F 0.64 GEN-Y, 1.5, 2.8 YESC Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-35 (VT)	No Tool Required
III	Not required	J-35616-4A (PU)	No Tool Required
IV	Not required	J-35616-64B (L-BU)	No Tool Required

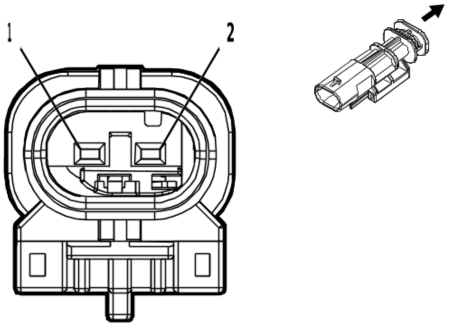
S146 Window/Outside Rearview Mirror Switch - Driver

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5 0.35	GY YE / GY	3380 190	Driver Window Main Control Down Switch Signal Left Outside Rearview Mirror Folding Motor Unfold Control	III III	AXG AXG- DZC
2	0.35	YE / VT	3397	Passenger Outside Rearview Mirror Motor Up [+] Down [-] Control	IV	—
3	0.35 0.5	WH GY	3398 3380	Passenger Outside Rearview Mirror Motor Common Control Driver Window Main Control Down Switch Signal	IV IV	(- A45) + (DBG/ DWI) AXG- DZC
4	0.35 0.5	GN / BK GN / WH	3396 3379	Passenger Outside Rearview Mirror Motor Right [+] Left [-] Control Window Switch Driver Up Signal	IV IV	(- A45) + (DBG/ DWI) AXG- DZC
5	0.35	GN	3381	Window Switch Driver Express Signal	IV	—
6	0.35	BN / BK	3389	Driver Outside Rearview Mirror Motor Right [+] Left [-] Control	IV	—
7	0.35	VT / BU	3390	Driver Outside Rearview Mirror Motor Up [+] Down [-] Control	IV	—
8	0.35	YE / BN	3391	Driver Mirror Motor Common Control	IV	—
9	0.5	GN / YE	6134	Body Control Module LIN Bus 3	IV	—
10	—	—	—	Not Occupied	—	—
11	0.5 0.35	GN / WH BU / VT	3379 191	Window Switch Driver Up Signal Left Outside Rearview Mirror Folding Motor Fold Control	III III	AXG- DZC DZC

S146 Window/Outside Rearview Mirror Switch - Driver (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
12	0.35 0.35	WH / GN WH / BN	3412 3410	Driver Outside Rearview Mirror Motor Fold Control Mirror Outside Rearview Mirror Fold Control	I I	A45+ AXG DWI
13	—	—	—	Not Occupied	—	—
14	0.35	WH / VT	3270	Driver Door Lock Motor Status Signal	IV	—
15	0.35	BU / VT	1124	Door Lock Key Switch Unlock Signal	IV	—
16	0.35	WH / YE	3395	Driver Outside Rearview Mirror Position Sensor Left [-] Right [+] Signal	IV	—
17	0.35	VT / RD	3392	Driver Outside Rearview Mirror Position Sensor 5V Reference	IV	—
18	0.35	GY / BN	3394	Driver Outside Rearview Mirror Position Sensor Up [+] Down [-] Signal	IV	—
19	0.35	BK / BN	3393	Driver Outside Rearview Mirror Position Sensor Low Reference	IV	—
20	—	—	—	Not Occupied	—	—
21	0.5	GN / WH	7530	Driver Seat Adjuster Memory Module LIN Bus 1	IV	—
22	0.35 0.35	GY / WH VT / YE	3411 3409	Driver Outside Rearview Mirror Motor Unfold Control Outside Rearview Mirror Motor Unfold Control	I I	A45+ AXG DWI
23	0.35	RD / VT	1940	Battery Positive Voltage	II	—
24	0.5	BK	1150	Ground	III	—

S157 Pickup Box Endgate Unlatch Switch ((QK1/QK2)+QT5)



4994411

Connector Part Information

Harness Type: Endgate Wiring Harness
OEM Connector: 35068608
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 MCON Series, Sealed(GY)

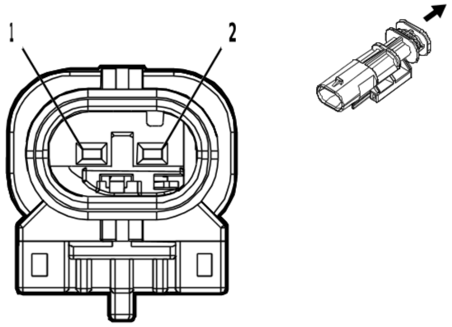
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

S157 Pickup Box Endgate Unlatch Switch ((QK1/QK2)+QT5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY	7292	Major Endgate Release Switch Signal Exterior	I	—
2	0.75	BK	1450	Ground	I	—

S157 Pickup Box Endgate Unlatch Switch ((QK1/QT2)+QT5)



4994411

Connector Part Information

Harness Type: Endgate Wiring Harness
OEM Connector: 35068608
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 MCON Series, Sealed(GY)

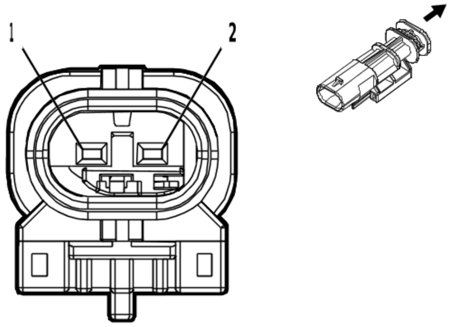
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

S157 Pickup Box Endgate Unlatch Switch ((QK1/QT2)+QT5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GY	7292	Major Endgate Release Switch Signal Exterior	I	—
2	0.75	BK	1450	Ground	I	—

S159E Pickup Box Endgate Control Switch - Exterior (QK2+QT5)



4994410

Connector Part Information

Harness Type: Endgate Wiring Harness
OEM Connector: 35235497
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 MCON Series, Sealed(GY)

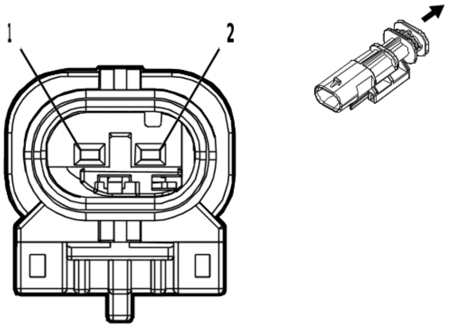
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

S159E Pickup Box Endgate Control Switch - Exterior (QK2+QT5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	7294	Minor Endgate Release Switch Discrete Signal Exterior	I	—
2	0.75	BK	1450	Ground	I	—

S159E Pickup Box Endgate Control Switch - Exterior (QT6)



4994411

Connector Part Information

Harness Type: Endgate Wiring Harness
OEM Connector: 35068608
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 1.2 MCON Series, Sealed(GY)

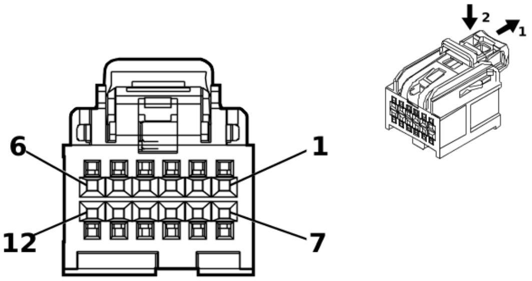
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-17 (L-GN)	No Tool Required

S159E Pickup Box Endgate Control Switch - Exterior (QT6)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	YE	1144	Endgate Release Switch Discrete Signal Exterior	I	—
2	0.75	BK	1450	Ground	I	—

S171L Instrument Panel Center Accessory Function Switch - Left



4975223

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35016616
Service Connector: 13519750
Description: 12-Way F 0.64 OCS Series(BK)

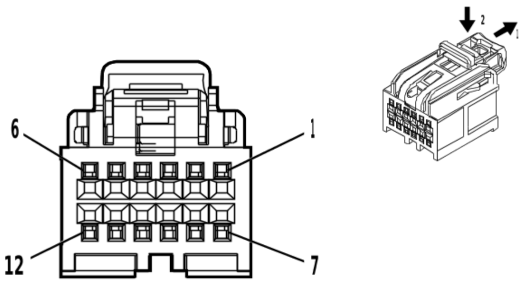
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19300660	J-35616-64B (L-BU)	J-38125-215A

S171L Instrument Panel Center Accessory Function Switch - Left

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY / GN	2555	Rear Parking Assist Disable Signal	I	—
2	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
3	0.5	BU / WH	3119	Roof Rail Air Bag Disable Switch Signal	I	—
4	0.35	GY / WH	3153	Lane Departure Warning Disable Switch Signal	I	—
5	0.35	WH	3152	Lane Departure Warning Indicator Control	I	—
6	0.35	BU / YE	6844	ABS/Traction Control Hill Descent Control Switch Signal	I	—
7	0.5	WH	6816	Indicator Dimming Control	I	—
8	0.35	GN / BN	5852	Rear Parking Assist Disable LED Signal	I	—
9	0.5	BK	1050	Ground	I	—
10	0.5	BN / WH	3895	Roof Rail Air Bag Disable Switch Low Reference	I	—
11	0.5	GN / YE	2081	Exhaust Brake Switch Signal	I	—
12	0.35	GN / WH	3438	Exhaust Brake Switch Indicator Control	I	—

S171R Instrument Panel Center Accessory Function Switch - Right



4997362

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35016613
Service Connector: 13519752
Description: 12-Way F 0.64 OCS Series(BN)

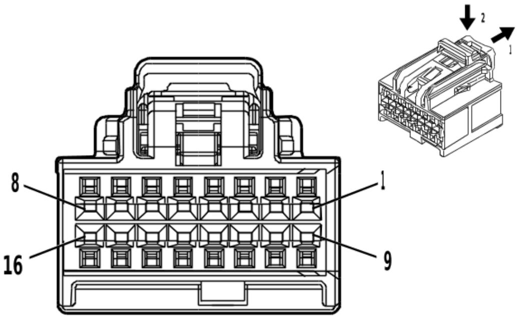
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19300660	J-35616-64B (L-BU)	J-38125-215A

S171R Instrument Panel Center Accessory Function Switch - Right

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GY / WH	4630	AC Power Outlet Switch Signal	I	—
2	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
3	0.35	BU / YE	6844	ABS/Traction Control Hill Descent Control Switch Signal	I	—
4	0.35	VT / BK	1639	Run/Crank Ignition 1 Voltage	I	—
5	0.35	BN / GN	4311	Power Take-Off Enable Cabin Switch Normally Closed Signal	I	—
6	—	—	—	Not Occupied	—	—
7	0.35	GN / WH	488	Power Take-Off Control Switch Signal	I	—
8	0.35	BN / WH	7462	Running Board Steps Disable Signal	I	—
9	0.5	BK	1050	Ground	I	—
10	0.35	WH	6816	Indicator Dimming Control	I	—
11	0.35	YE	7755	AC Power Outlet Status Indicator Control	I	—
12	0.35	BU / GY	553	Shift Select Switch Performance Signal	I	—

S172 Auxiliary Multifunction Switch



4873243

Connector Part Information

Harness Type: Battery Positive Cable Extension Cable
OEM Connector: 35016343
Service Connector: Service by Harness - See Part Catalog
Description: 16-Way F 0.64 OCS Series(BK)

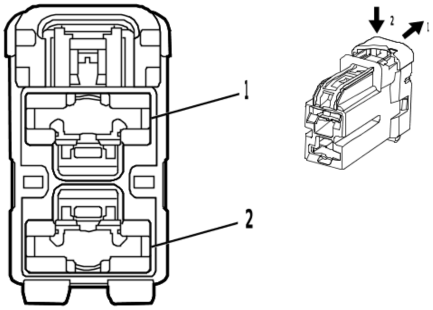
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

S172 Auxiliary Multifunction Switch

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
3	0.35	WH	6816	Indicator Dimming Control	I	—
4 - 5	—	—	—	Not Occupied	—	—
6	0.35	BK	961	—	I	—
7	0.35	BK	962	—	I	—
8	0.35	BK	963	—	I	—
9	0.35	BK	964	—	I	—
10	0.5	WH / BK	5990	Emergency Vehicle Roof Lamp Switch Signal	I	—
11	—	—	—	Not Occupied	—	—
12	0.75	BK	1050	Ground	I	—
13 - 16	—	—	—	Not Occupied	—	—

T1 Accessory DC/AC Power Inverter Module X1 (KI4/KI5)



2453116

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 13581928
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 9.5 Series(BK)

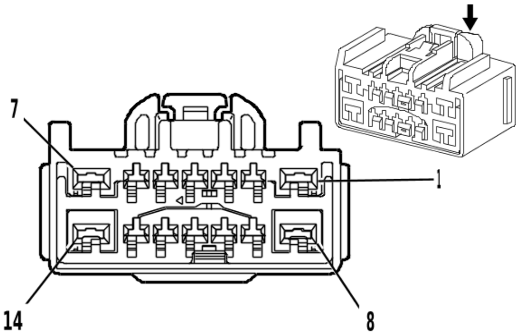
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-22 (RD)	No Tool Required

T1 Accessory DC/AC Power Inverter Module X1 (KI4/KI5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	5	BN / BK	4629	DC/AC Inverter Control	I	—
2	5	BK	1150	Ground	I	—

T1 Accessory DC/AC Power Inverter Module X2 (KI4)



1540775

Connector Part Information

Harness Type: Body Rear Wiring Harness Extension Harness
OEM Connector: 33356826
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way F 1.5, 2.8 YESC Series(BU)

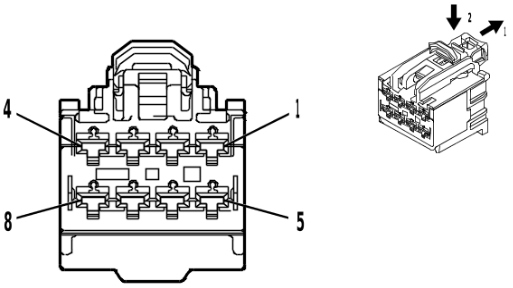
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required

T1 Accessory DC/AC Power Inverter Module X2 (KI4)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	5683	120V AC Phase A	II	—
2	—	—	—	Not Occupied	—	—
3	0.35	VT / YE	5985	Accessory Wake-Up Serial Data	I	—
4	0.35	WH / GN	4628	DC/AC Inverter Relay Control	I	—
5	0.35	BU / BN	6807	DC/AC Inverter Control	I	—
6	—	—	—	Not Occupied	—	—
7	0.75	BK / WH	2264	120V AC Phase A 2	II	—
8	0.75	RD	5684	120V AC Phase B	II	—
9	0.35	Bare	514	Low Reference	I	—
10	0.35	GN	5060	Low Speed GMLAN Serial Data	I	—
11	—	—	—	Not Occupied	—	—
12	0.75	GN / BN	2266	DC/AC Inverter Control 2	I	—
13	0.35	Bare	2257	Low Reference	I	—
14	0.75	RD / WH	2265	120V AC Phase B 2	II	—

T3 Audio Amplifier X1 (UQA)



4875738

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 33223792
Service Connector: 19369366
Description: 8-Way F 2.8 OCS Series(BK)

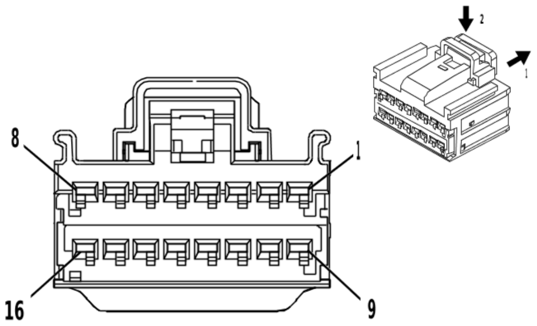
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required

T3 Audio Amplifier X1 (UQA)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	2.5	BU / GY	346	Left/Rear Subwoofer [+] Control	I	—
2	0.75	YE	200	Right Front Speaker 1 [+] Control	I	—
3	0.75	BU	201	Left Front Speaker 1 [+] Control	I	—
4	2.5	RD / YE	3740	Battery Positive Voltage	I	—
5	2.5	GN / BK	1794	Left/Rear Subwoofer [-] Control	I	—
6	0.75	YE / BK	117	Right Front Speaker [-] Control 1	I	—
7	0.75	BN / BU	118	Left Front Speaker [-] Control 1	I	—
8	2.5	BK / WH	2751	Signal Ground	I	—

T3 Audio Amplifier X2 (UQA)



4332214

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 15512506
Service Connector: 13591061
Description: 16-Way F 1.5 OCS Series(BK)

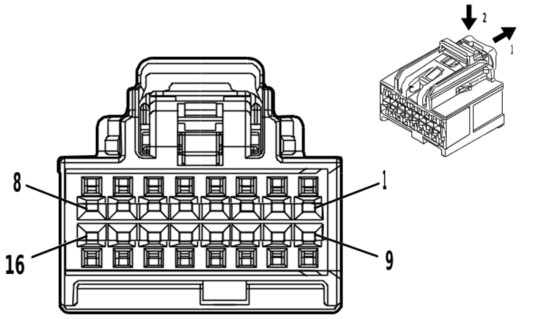
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	84757974	J-35616-2A (GY)	J-38125-215A

T3 Audio Amplifier X2 (UQA)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	Not Occupied	—	—
2	0.75	BN / BK	1953	Right Front Midrange Speaker [-] Control	I	—
3	0.75	BU / VT	1857	Left Front Midrange Speaker [+] Control	I	—
4	0.5	WH	46	Right Rear Speaker [+] Control	I	—
5	0.5	GN	199	Left Rear Speaker [+] Control	I	—
6 - 9	—	—	—	Not Occupied	—	—
10	0.75	WH / YE	1853	Right Front Midrange Speaker [+] Control	I	—
11	0.75	BU / BN	1957	Left Front Midrange Speaker [-] Control	I	—
12	0.5	BU / BK	115	Right Rear Speaker [-] Control	I	—
13	0.5	GN / BK	116	Left Rear Speaker [-] Control	I	—
14 - 16	—	—	—	Not Occupied	—	—

T3 Audio Amplifier X3 (UQA)



4873243

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35016343
Service Connector: 13519738
Description: 16-Way F 0.64 OCS Series(BK)

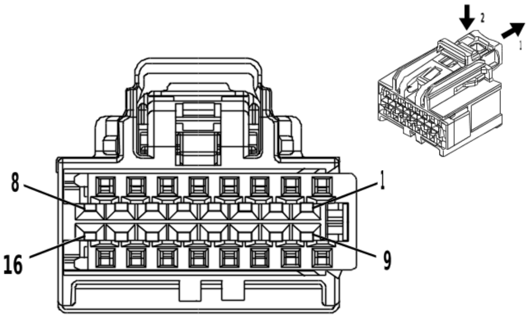
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19354230	J-35616-64B (L-BU)	J-38125-215A

T3 Audio Amplifier X3 (UQA)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	GY / GN	1102	Low Speed GMLAN Serial Data 2	I	—
2 - 16	—	—	—	Not Occupied	—	—

T3 Audio Amplifier X4 (UQA)



4256181

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35016345
Service Connector: 13519740
Description: 16-Way F 0.64 OCS Series(BN)

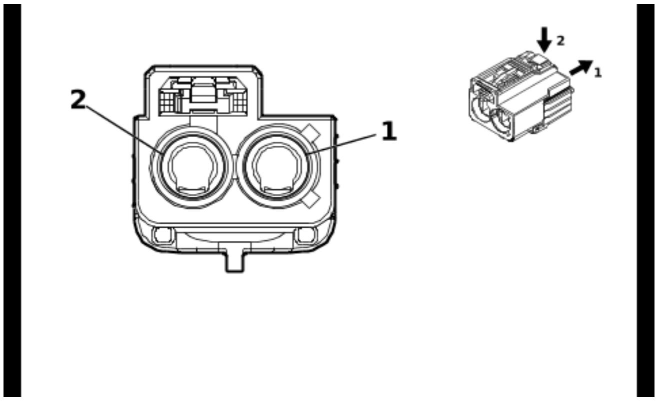
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	84619127	J-35616-64B (L-BU)	J-38125-215A

T3 Audio Amplifier X4 (UQA)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 2	—	—	—	Not Occupied	—	—
3	0.35	GY / BK	7215	Ethernet Bus 6 [+]	I	—
4	0.35	BN / BK	7214	Ethernet Bus 6 [-]	I	—
5 - 16	—	—	—	Not Occupied	—	—

T4G Cellular Phone, Navigation, and Digital Radio Antenna X1 (UE1)



5661671

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 33351060
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 2-Way F Coax Type(VT)

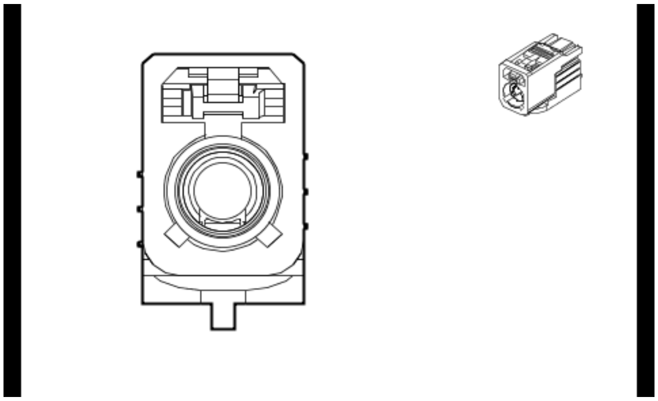
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

T4G Cellular Phone, Navigation, and Digital Radio Antenna X1 (UE1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	3134	Coaxial Antenna Cell/GPS Combined Signal	I	—
2	—	—	6241	Cell Phone Antenna Coaxial Cable Low Reference	I	—

T4G Cellular Phone, Navigation, and Digital Radio Antenna X2 (U2K)



5661657

Connector Part Information

Harness Type: Instrument Panel Wiring Harness COAX
OEM Connector: 33351022
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Coax Type(YE)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

T4G Cellular Phone, Navigation, and Digital Radio Antenna X2 (U2K)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	Coax Cable	—	(XM +/-HD) Coaxial Antenna XM Signal	I	—

T4M Radio Antenna

—

Connector Part Information

Harness Type: Frontview Camera Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way

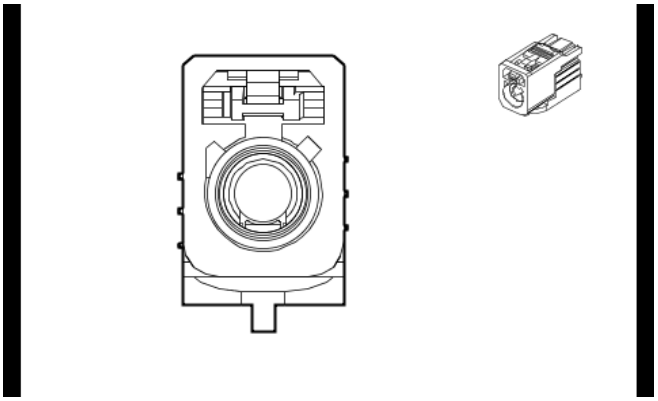
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

T4M Radio Antenna

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
BK	—	—	Coax Cable	Coax Cable	I	—

T4P Navigation Antenna (-UE1)



Connector Part Information

- Harness Type: Instrument Panel Wiring Harness COAX
- OEM Connector: 33351013
- Service Connector: Service by Cable Assembly — See Part Catalog
- Description: 1-Way F Coax Type(BU)

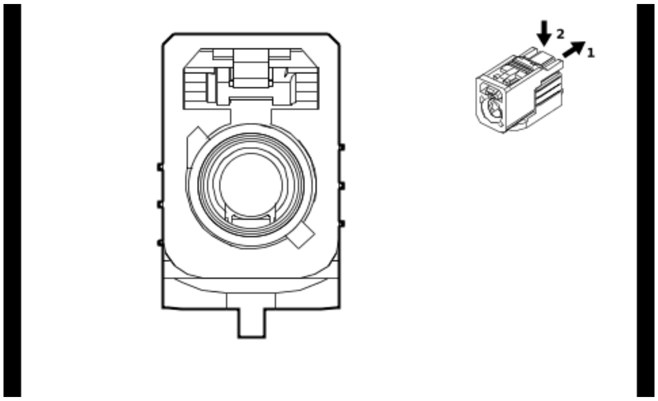
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

T4P Navigation Antenna (-UE1)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	Coax Cable	—	(GPS only) Coaxial Antenna GPS Signal	I	—

T4T Wireless Communication Antenna - WLAN



5518436

Connector Part Information

Harness Type: Instrument Panel Wiring Harness COAX
OEM Connector: 33351021
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Coax Type(BG)

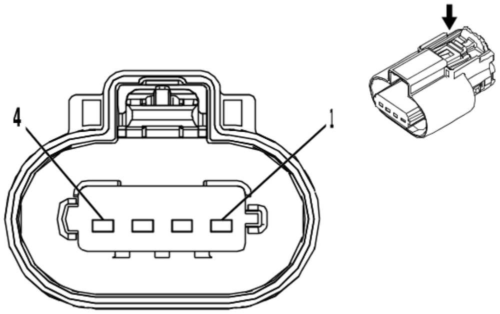
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

T4T Wireless Communication Antenna - WLAN

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	Coax Cable	—	WiFi Antenna Coaxial Signal	I	—

T8A Ignition Coil 1 (L8T)



3240115

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 1.5 MX Series, Sealed(BK)

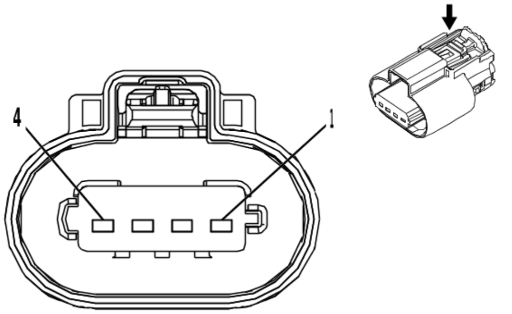
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required
II	Not required	J-35616-2A (GY)	No Tool Required

T8A Ignition Coil 1 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	4550	Ground	II	—
2	0.5	BK / BU	2129	Ignition Control Low Reference Bank 1	I	—
3	0.5	BU / VT	2121	Ignition Control 1	I	—
4	0.75	VT / BU	5291	Powertrain Main Relay Fused Supply Voltage 2	I	—

T8B Ignition Coil 2 (L8T)



3240115

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 1.5 MX Series, Sealed(BK)

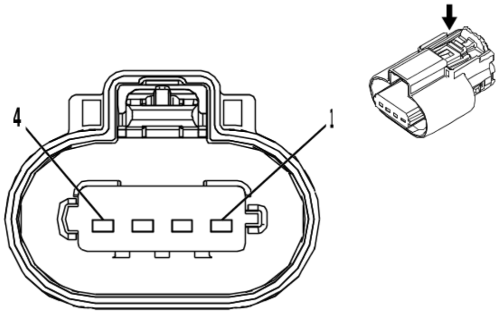
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

T8B Ignition Coil 2 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	4550	Ground	I	—
2	0.5	BK / GY	2130	Ignition Control Low Reference Bank 2	I	—
3	0.5	BU / WH	2122	Ignition Control 2	I	—
4	0.75	VT / BU	5292	Powertrain Main Relay Fused Supply Voltage 3	I	—

T8C Ignition Coil 3 (L8T)



3240115

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 1.5 MX Series, Sealed(BK)

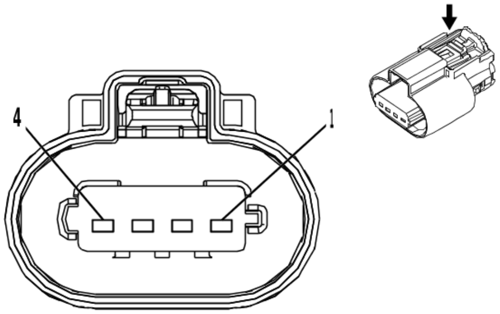
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

T8C Ignition Coil 3 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	4550	Ground	I	—
2	0.5	BK / BU	2129	Ignition Control Low Reference Bank 1	I	—
3	0.5	GN / BU	2123	Ignition Control 3	I	—
4	0.75	VT / BU	5291	Powertrain Main Relay Fused Supply Voltage 2	I	—

T8D Ignition Coil 4 (L8T)



3240115

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 1.5 MX Series, Sealed(BK)

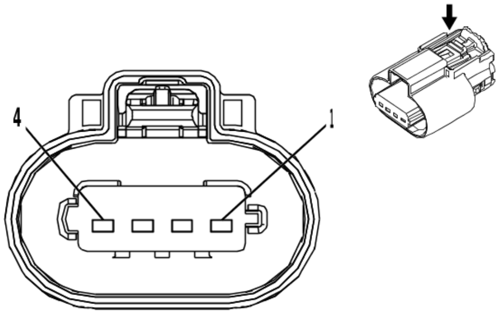
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

T8D Ignition Coil 4 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	4550	Ground	I	—
2	0.5	BK / GY	2130	Ignition Control Low Reference Bank 2	I	—
3	0.5	YE / BU	2124	Ignition Control 4	I	—
4	0.75	VT / BU	5292	Powertrain Main Relay Fused Supply Voltage 3	I	—

T8E Ignition Coil 5 (L8T)



3240115

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 1.5 MX Series, Sealed(BK)

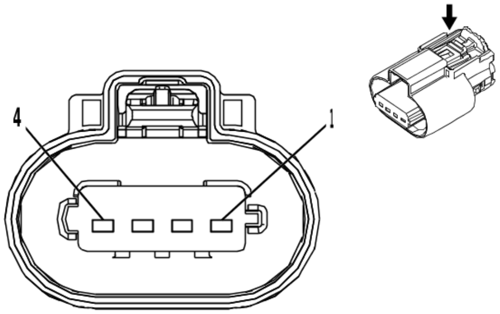
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

T8E Ignition Coil 5 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	4550	Ground	I	—
2	0.5	BK / BU	2129	Ignition Control Low Reference Bank 1	I	—
3	0.5	BU / GY	2125	Ignition Control 5	I	—
4	0.75	VT / BU	5291	Powertrain Main Relay Fused Supply Voltage 2	I	—

T8F Ignition Coil 6 (L8T)



3240115

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 1.5 MX Series, Sealed(BK)

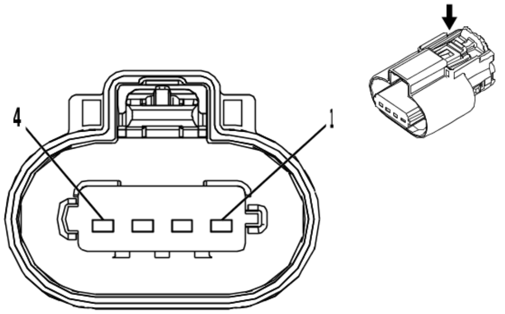
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

T8F Ignition Coil 6 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	4550	Ground	I	—
2	0.5	BK / GY	2130	Ignition Control Low Reference Bank 2	I	—
3	0.5	BN / BU	2126	Ignition Control 6	I	—
4	0.75	VT / BU	5292	Powertrain Main Relay Fused Supply Voltage 3	I	—

T8G Ignition Coil 7 (L8T)



3240115

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 1.5 MX Series, Sealed(BK)

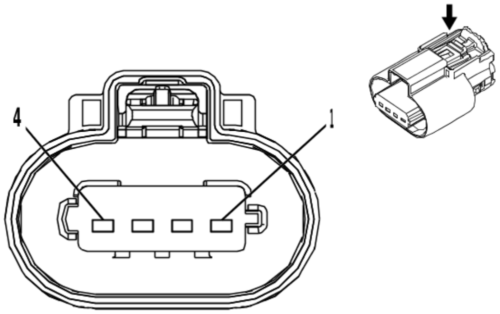
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

T8G Ignition Coil 7 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	4550	Ground	I	—
2	0.5	BK / BU	2129	Ignition Control Low Reference Bank 1	I	—
3	0.5	GN / GY	2127	Ignition Control 7	I	—
4	0.75	VT / BU	5291	Powertrain Main Relay Fused Supply Voltage 2	I	—

T8H Ignition Coil 8 (L8T)



3240115

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13863211
Service Connector: 19367596
Description: 4-Way F 1.5 MX Series, Sealed(BK)

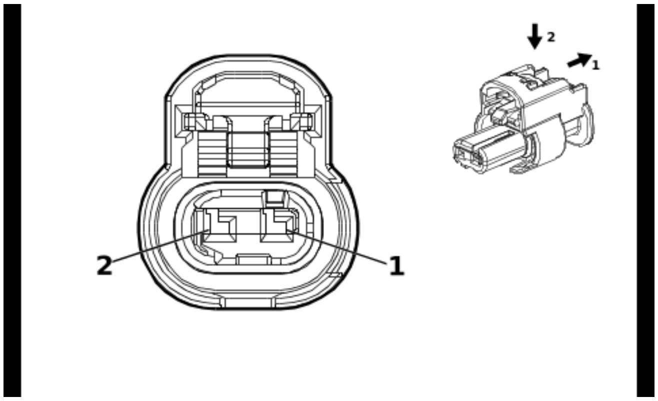
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

T8H Ignition Coil 8 (L8T)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.75	BK	4550	Ground	I	—
2	0.5	BK / GY	2130	Ignition Control Low Reference Bank 2	I	—
3	0.5	VT / WH	2128	Ignition Control 8	I	—
4	0.75	VT / BU	5292	Powertrain Main Relay Fused Supply Voltage 3	I	—

T10B Keyless Entry Antenna - Instrument Panel Compartment (BTM)



4649903

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 33327048
Service Connector: 85519075
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

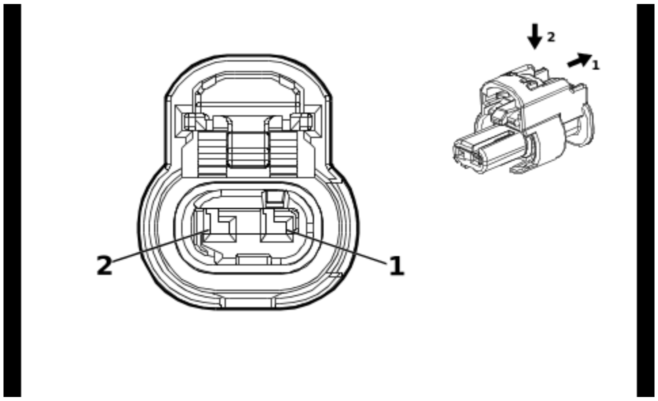
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

T10B Keyless Entry Antenna - Instrument Panel Compartment (BTM)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN / BK	3552	Interior Passive Entry Antenna 1 High Signal	I	—
2	0.5	WH	3553	Interior Passive Entry Antenna 1 Low Signal	I	—

T10E Keyless Entry Antenna - Rear Compartment (BTM)



4649903

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33327048
Service Connector: 85519075
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

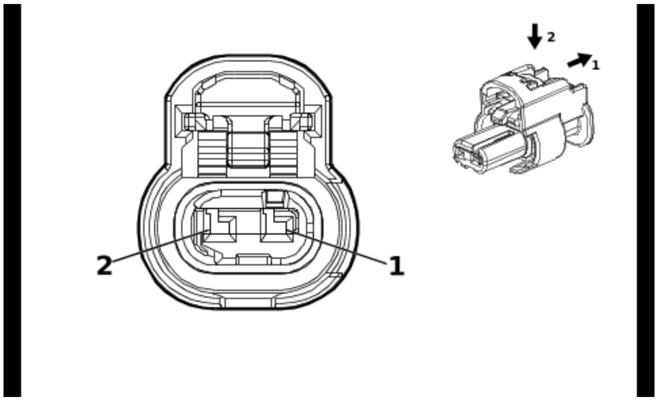
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

T10E Keyless Entry Antenna - Rear Compartment (BTM)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN / GN	3568	Rear Closure Passive Entry Antenna High Signal	I	—
2	0.5	GN / GY	3569	Rear Closure Passive Entry Antenna Low Signal	I	—

T10J Keyless Entry Antenna - Center Console Front (BTM+D07)



4649903

Connector Part Information

Harness Type: Front Floor Console Wiring Harness
OEM Connector: 33327048
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

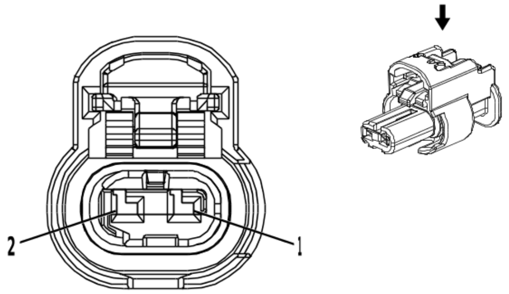
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

T10J Keyless Entry Antenna - Center Console Front (BTM+D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU	3554	Interior Passive Entry Antenna 2 High Signal	I	—
2	0.5	GY / BK	3555	Interior Passive Entry Antenna 2 Low Signal	I	—

T10V Keyless Entry Antenna - Front Middle Seat (BTM-D07)



4335931

Connector Part Information

Harness Type: Front Floor Console Wiring Harness
OEM Connector: 1-2296694-2
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F 1.2 MCON Series, Sealed(BK)

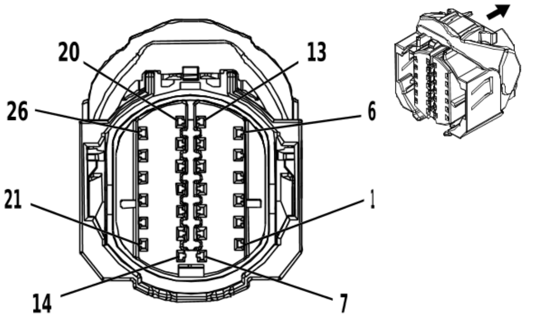
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required

T10V Keyless Entry Antenna - Front Middle Seat (BTM-D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BU	3554	Interior Passive Entry Antenna 2 High Signal	I	—
2	0.5	GY / BK	3555	Interior Passive Entry Antenna 2 Low Signal	I	—

T12 Automatic Transmission Assembly X1 (MGM/MGU)



4420489

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33178413
Service Connector: 13596549
Description: 26-Way F 1.2 MCON-CB Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19331733	J-35616-12 (BU)	J-38125-215A
II	84963773	J-35616-12 (BU)	J-38125-215A

T12 Automatic Transmission Assembly X1 (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	GN / YE	6353	Input Speed Signal	I	—
2	0.5	GN / VT	4510	Transmission Intermediate Speed Signal	I	—
3	0.5	BN / WH	6254	Transmission Input Speed Sensor Signal	I	—
4	0.5	GY / BU	6358	Output Speed Signal	I	—
5	0.5	GN / YE	5724	Ignition Mode Switch Mode Control	I	—
6	0.5	WH / BU	5726	Ignition Mode Switch Mode Control Backup	I	—
7	0.5	YE / GN	4170	Transmission Output Shaft Speed Sensor Circuit 9V Reference	I	—
8	0.5	YE / BU	4171	Transmission Input Shaft Speed Sensor Circuit 9V Reference	I	—
9	0.5	GY / BN	6388	Transmission High Side Driver 2 Control	I	—
10	0.75	RD / VT	7940	Battery Positive Voltage	I	—
11	0.5	GN / GY	6387	Transmission High Side Driver 1 Control	I	—
12	0.5	YE / BU	3992	Internal Mode Switch Voltage Supply A	I	—
13	0.5	BN / WH	585	Transmission Fluid Temperature Sensor Signal	I	—
14	0.5	YE / BN	6404	Clutch Solenoid Valve E Control	I	—
15	0.5	GY / GN	6403	Clutch Solenoid Valve D Control	I	—
16	0.5	GY	6402	Clutch Solenoid Valve C Control	I	—
17	1.5	BK	4450	Ground	II	—
18	0.5	GN / WH	2968	Transmission Auxiliary Fluid Pump Control	I	—
19	0.5	GN / BK	7819	Default Disable Solenoid Control	I	—

T12 Automatic Transmission Assembly X1 (MGM/MGU) (cont'd)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
20	0.5	BK / GY	3927	Transmission Internal Mode Switch Feedback Signal	I	—
21	0.5	VT	4509	Transmission Clutch F Control	I	—
22	0.5	WH / BU	4507	Transmission Clutch H Control	I	—
23	0.5	WH	4508	Transmission Clutch G Control	I	—
24	0.5	GN / WH	1530	Transmission Line Pressure Control Solenoid Valve Control	I	—
25	0.5	VT / WH	422	Torque Converter Clutch Solenoid Valve Control	I	—
26	0.5	BK / BN	586	Transmission Fluid Temperature Sensor Low Reference	I	—

T12 Automatic Transmission Assembly X2 (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: —

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

T12 Automatic Transmission Assembly X2 (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	YE / GY	5726	Ignition Mode Switch Mode Control Backup	I	—
2	—	YE	5724	Ignition Mode Switch Mode Control	I	—
3	—	YE / OG	6358	Output Speed Signal	I	—
4	—	WH / BU	6254	Transmission Input Speed Sensor Signal	I	—
5	—	VT / GN	4510	Transmission Intermediate Speed Signal	I	—
6	—	WH / VT	6353	Input Speed Signal	I	—
7	—	BN / YE	585	Transmission Fluid Temperature Sensor Signal	I	—
8	—	OG	4162	Transmission Fluid Pressure Sensor 1 Circuit 5V Reference	I	—
9	—	BN	6387	Transmission High Side Driver 1 Control	I	—
11	—	WH	6388	Transmission High Side Driver 2 Control	I	—
12	—	BU	4171	Transmission Input Shaft Speed Sensor Circuit 9V Reference	I	—
13	—	GN	4170	Transmission Output Shaft Speed Sensor Circuit 9V Reference	I	—

T12 Automatic Transmission Assembly X3 (MGM/MGU)

—

Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: —

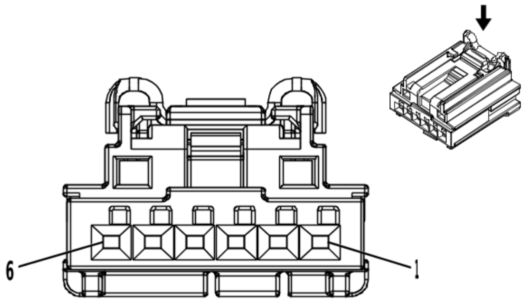
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

T12 Automatic Transmission Assembly X3 (MGM/MGU)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BN / WH	4509	Transmission Clutch F Control	I	—
2	—	YE / VT	4507	Transmission Clutch H Control	I	—
3	—	BU / GY	4508	Transmission Clutch G Control	I	—
4	—	GN / OG	1530	Transmission Line Pressure Control Solenoid Valve Control	I	—
5	—	GY / BN	422	Torque Converter Clutch Solenoid Valve Control	I	—
6	—	BK / BN	586	Transmission Fluid Temperature Sensor Low Reference	I	—
7	—	BU / GN	6404	Clutch Solenoid Valve E Control	I	—
8	—	GN / BN	6403	Clutch Solenoid Valve D Control	I	—
9	—	GY	6402	Clutch Solenoid Valve C Control	I	—
12	—	VT	7819	Default Disable Solenoid Control	I	—
13	—	BK / GY	3927	Transmission Internal Mode Switch Feedback Signal	I	—

T22 Mobile Device Wireless Charger Module (K4C)



3960313

Connector Part Information

Harness Type: Front Floor Console Wiring Harness
OEM Connector: 13920633
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 Generation Y Series(BK)

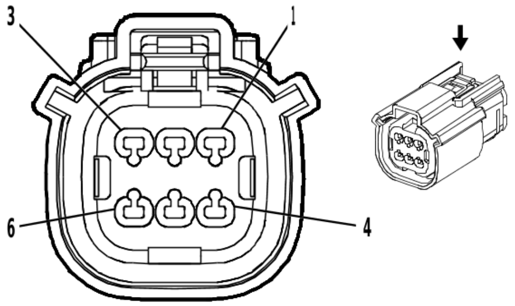
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

T22 Mobile Device Wireless Charger Module (K4C)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT	4601	Retained Accessory Power Control	I	—
2	0.5	BK	1250	Ground	I	—
3	0.35	GN	4512	Wireless Charging System Charge Indicator Control	I	—
4	0.5	BN	4511	Wireless Charging System Fault Indicator Control	I	—
5 - 6	—	—	—	Not Occupied	—	—

X80C Accessory Power Receptacle - Cargo (KC9)



1986157

Connector Part Information

Harness Type: Chassis Rear Wiring Harness
OEM Connector: 15533832
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 1.5 MX Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required

X80C Accessory Power Receptacle - Cargo (KC9)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BN	7754	AC Power Outlet Enable Signal	I	—
2	0.75	GN / BN	2266	DC/AC Inverter Control 2	I	—
3	—	—	—	Not Occupied	—	—
4	0.75	BK / WH	2264	120V AC Phase A 2	I	—
5	1	BK	6650	Ground	I	—
6	0.75	RD / WH	2265	120V AC Phase B 2	I	—

X80C Accessory Power Receptacle - Cargo (KC9/KCA)

—

Connector Part Information

Harness Type: Cargo Power Outlet Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 5-Way

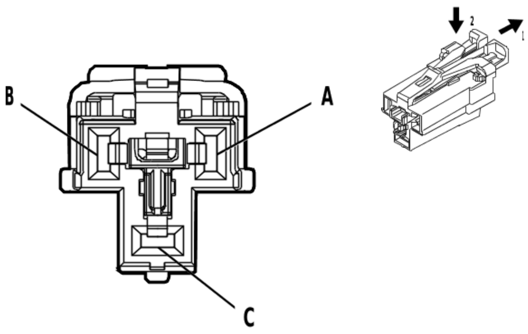
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X80C Accessory Power Receptacle - Cargo (KC9/KCA)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BN	7754	AC Power Outlet Enable Signal	I	—
2	—	GN / BN	2266	DC/AC Inverter Control 2	I	—
4	—	BK / WH	2264	120V AC Phase A 2	I	—
5	—	BK	6650	Ground	I	—
6	—	RD / WH	2265	120V AC Phase B 2	I	—

X80G Accessory Power Receptacle - Instrument Panel (D09)



4872413

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 33386302
Service Connector: 19369281
Description: 3-Way F 2.8 APEX Series(GY)

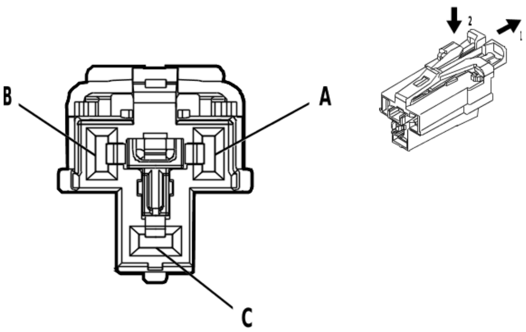
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

X80G Accessory Power Receptacle - Instrument Panel (D09)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	RD / BN	4240	Battery Positive Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1050	Ground	I	—

X80L Accessory Power Receptacle - Center Console Rear (D07)



4872413

Connector Part Information

Harness Type: Front Floor Console Wiring Harness
OEM Connector: 33386302
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 2.8 APEX Series(GY)

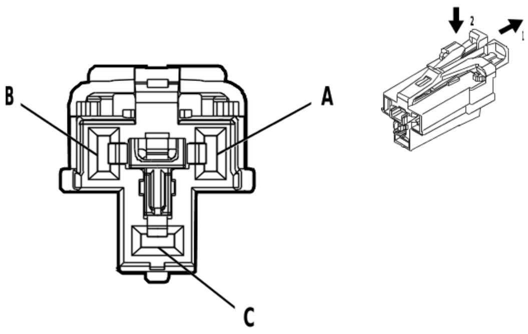
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

X80L Accessory Power Receptacle - Center Console Rear (D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	RD / WH	1040	Battery Positive Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1250	Ground	I	—

X80M Accessory Power Receptacle - Rear Seat (KPA)



4872413

Connector Part Information

Harness Type: Front Floor Console Wiring Harness
OEM Connector: 33386302
Service Connector: Service by Harness - See Part Catalog
Description: 3-Way F 2.8 APEX Series(GY)

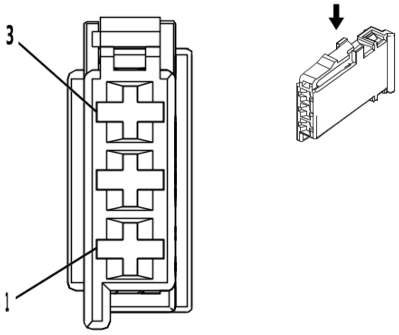
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-35 (VT)	No Tool Required

X80M Accessory Power Receptacle - Rear Seat (KPA)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	1.5	RD / WH	1040	Battery Positive Voltage	I	—
B	—	—	—	Not Occupied	—	—
C	1.5	BK	1150	Ground	I	—

X81 Accessory Power Receptacle - 110V AC X1 (KI4)



2039656

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 10865339
Service Connector: 86790560
Description: 3-Way F 1.6 Micro-Timer Series(BK)

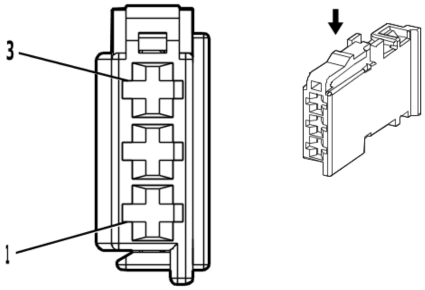
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

X81 Accessory Power Receptacle - 110V AC X1 (KI4)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BN	7754	AC Power Outlet Enable Signal	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	BK	5683	120V AC Phase A	I	—

X81 Accessory Power Receptacle - 110V AC X2 (KI4)



2236412

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 13648774
Service Connector: 19367740
Description: 3-Way F 1.6 Timer Series, Sealed(GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required

X81 Accessory Power Receptacle - 110V AC X2 (KI4)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	BU / BN	6807	DC/AC Inverter Control	I	—
2	—	—	—	Not Occupied	—	—
3	0.75	RD	5684	120V AC Phase B	I	—

X81B Accessory Power Receptacle - 220V AC X1 (KI5)

—

Connector Part Information

Harness Type: Power Receptacle Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X81B Accessory Power Receptacle - 220V AC X1 (KI5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BN	7754	AC Power Outlet Enable Signal	I	—
3	—	BK	5683	120V AC Phase A	I	—

X81B Accessory Power Receptacle - 220V AC X2 (KI5)

—

Connector Part Information

Harness Type: Power Receptacle Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way

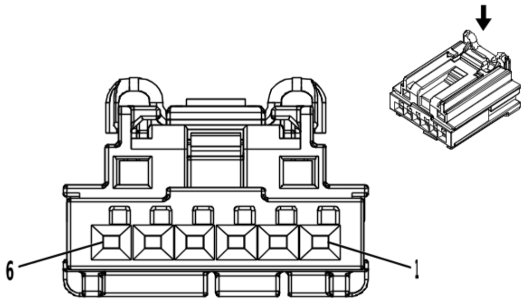
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X81B Accessory Power Receptacle - 220V AC X2 (KI5)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BU / BN	6807	DC/AC Inverter Control	I	—
3	—	RD	5684	120V AC Phase B	I	—

X83 Auxiliary Audio Input X1



3960313

Connector Part Information

Harness Type: Front Floor Console Wiring Harness
OEM Connector: 13920633
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 Generation Y Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

X83 Auxiliary Audio Input X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	RD / WH	1340	Battery Positive Voltage	I	—
2	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
3	0.5	BK / WH	2751	Signal Ground	I	—
4 - 6	—	—	—	Not Occupied	—	—

X83 Auxiliary Audio Input X2 (D07)

—

Connector Part Information

Harness Type: Auxiliary Audio Input Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: —

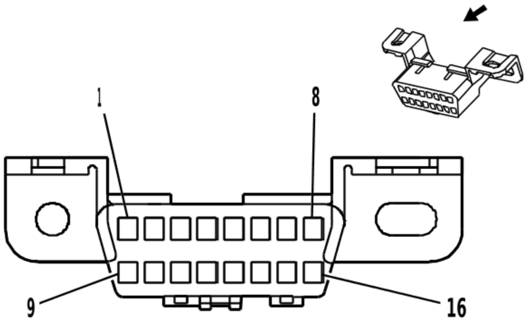
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X83 Auxiliary Audio Input X2 (D07)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	—	I	—

X84 Data Link Connector



68793

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 12110250
Service Connector: 12110250
Description: 16-Way F 150 Metri-Pack Series(BK)

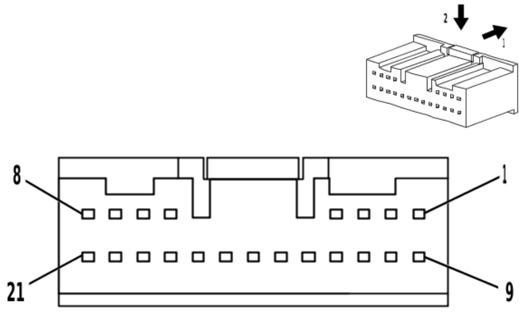
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13580059	J-35616-14 (GN)	J-38125-12A

X84 Data Link Connector

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	GN / WH	2100	Low Speed GMLAN Serial Data 3	I	—
2	—	—	—	Not Occupied	—	—
3	0.35	BU / WH	2089	High Speed GMLAN Serial Data [+] 13	I	—
4	0.5	BK	1850	Ground	I	—
5	0.5	BK / WH	1851	Signal Ground	I	—
6	0.35	BU / BK	1978	High Speed GMLAN Serial Data [+] 11	I	—
7 - 10	—	—	—	Not Occupied	—	—
11	0.35	WH	2090	High Speed GMLAN Serial Data [-] 13	I	—
12	0.35	BU / BN	1980	High Speed GMLAN Serial Data [+] 12	I	—
13	0.35	WH	1981	High Speed GMLAN Serial Data [-] 12	I	—
14	0.35	WH	1979	High Speed GMLAN Serial Data [-] 11	I	—
15	—	—	—	Not Occupied	—	—
16	0.5	RD / WH	640	Battery Positive Voltage	I	—

X85 Steering Wheel Air Bag Coil X1



3960237

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 33291416
Service Connector: 13510218
Description: 21-Way F 0.64 Series(YE)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575742	J-35616-64B (L-BU)	J-38125-215A
II	13575865	J-35616-64B (L-BU)	J-38125-215A

X85 Steering Wheel Air Bag Coil X1

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	BK / WH	1851	Signal Ground	I	—
2	0.35	GN / WH	3287	Horn Switch Signal	I	—
3 - 4	—	—	—	Not Occupied	—	—
5	0.35	OG / GN	3023	Steering Wheel Air Bag Stage 2 High Control	II	—
6	0.35	WH / OG	3022	Steering Wheel Air Bag Stage 2 Low Control	II	—
7	0.35	BN / OG	3020	Steering Wheel Air Bag Stage 1 Low Control	II	—
8	0.35	OG / VT	3021	Steering Wheel Air Bag Stage 1 High Control	II	—
9	0.35	GN / BK	3894	Instrument Panel Cluster Control Module LIN Bus 1	I	—
10	0.35	GN / BU	4119	HVAC Control Module LIN Bus 2	I	—
11	0.35	BN / GN	1884	Cruise Control Set/Coast/Resume/Accelerate Switch Signal	I	—
12	0.35	WH / RD	1444	12V Reference	I	—
13	—	—	—	Not Occupied	—	—
14	0.35	RD / YE	3040	Battery Positive Voltage	I	—
15	0.35	GY / GN	5737	Distance Sensing Cruise Control Gap Up/Down Switch Signal	I	—
16	—	—	—	Not Occupied	—	—
17	0.5	YE	6817	LED Backlight Dimming Control 1	I	—
18 - 19	—	—	—	Not Occupied	—	—
20	0.5	BK	1850	Ground	I	—
21	0.5	VT / WH	1139	Run/Crank Ignition 1 Voltage	I	—

X85 Steering Wheel Air Bag Coil X2

—

Connector Part Information

Harness Type: Steering Wheel Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: —

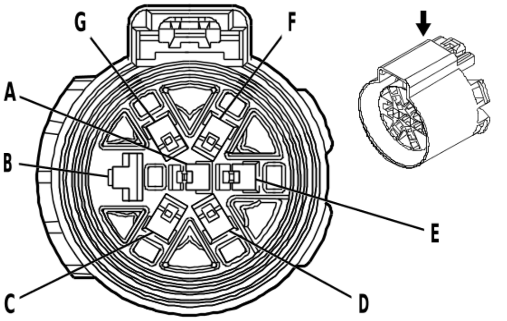
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X85 Steering Wheel Air Bag Coil X2

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	BK / WH	1851	Signal Ground	I	—
2	—	GN / WH	3287	Horn Switch Signal	I	—
5	—	GY / OG	3023	Steering Wheel Air Bag Stage 2 High Control	I	—
6	—	OG / VT	3022	Steering Wheel Air Bag Stage 2 Low Control	I	—
7	—	OG / WH	3020	Steering Wheel Air Bag Stage 1 Low Control	I	—
8	—	YE / OG	3021	Steering Wheel Air Bag Stage 1 High Control	I	—
9	— —	VT / WH OG	1139 1139	Run/Crank Ignition 1 Voltage Run/Crank Ignition 1 Voltage	I I	KI3 - KI3
10	—	BK	1850	Ground	I	—
13	—	YE	6817	LED Backlight Dimming Control 1	I	—
15	— —	GY / GN VT	5737 5737	Distance Sensing Cruise Control Gap Up/Down Switch Signal Distance Sensing Cruise Control Gap Up/Down Switch Signal	I I	UEU - UEU
16	—	RD / YE	3040	Battery Positive Voltage	I	—
18	— —	WH / RD BU	1444 1444	12V Reference 12V Reference	I I	K34 - K34
19	—	BN / GN	1884	Cruise Control Set/Coast/Resume/Accelerate Switch Signal	I	—
20	—	WH	4119	HVAC Control Module LIN Bus 2	I	—
21	—	BK / BU	3894	Instrument Panel Cluster Control Module LIN Bus 1	I	—

X88 Trailer Connector (U1D)



2056936

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 13857223
Service Connector: 86816072
Description: 7-Way F 280, 630 Metri-Pack Series, Sealed(BK)

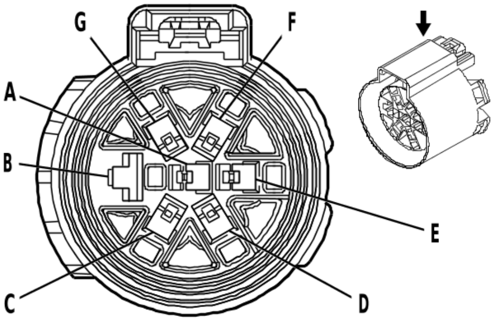
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-42 (RD)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required

X88 Trailer Connector (U1D)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75 0.75	WH / GN WH / GN	1624 5189	Trailer Backup Lamp Control Trailer Backup Lamp Control	II II	— —
B	5 5	BK WH	1750 22	Ground Trailer Ground	I I	— —
C	4	BU	47	Trailer Auxiliary Control	II	—
D	0.75	GN / VT	1619	Right Rear Trailer Stop/Turn Lamp Control	II	—
E	4	RD / GN	742	Battery Positive Voltage	II	—
F	0.75 1.5	GY / BN GY / BN	2109 2109	Trailer Park Lamp Control Trailer Park Lamp Control	II II	— —
G	0.75 0.75	YE / BU YE / BU	1618 318	Left Rear Trailer Stop/Turn Lamp Control Left Rear Trailer Stop/Turn Lamp Control	II II	— —

X88G Trailer Connector - 5th Wheel



2056936

Connector Part Information

Harness Type: Trailer Rear Wiring Harness
OEM Connector: 13857223
Service Connector: Service by Harness - See Part Catalog
Description: 7-Way F 280, 630 Metri-Pack Series, Sealed(BK)

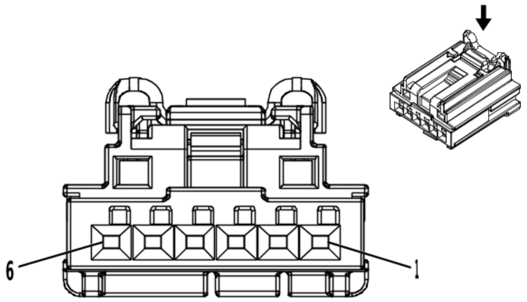
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-42 (RD)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required

X88G Trailer Connector - 5th Wheel

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
A	0.75	WH / GN	1624	Trailer Backup Lamp Control	II	—
B	5	WH	22	Trailer Ground	I	—
C	4	BU	47	Trailer Auxiliary Control	II	—
D	0.75	GN / VT	1619	Right Rear Trailer Stop/Turn Lamp Control	II	—
E	4	RD / GN	742	Battery Positive Voltage	II	—
F	1.5	GY / BN	2109	Trailer Park Lamp Control	II	—
G	0.75	YE / BU	318	Left Rear Trailer Stop/Turn Lamp Control	II	—

X92 USB Receptacle X1 (IOS/IOT)



3960313

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 13920633
Service Connector: 19332786
Description: 6-Way F 0.64 Generation Y Series(BK)

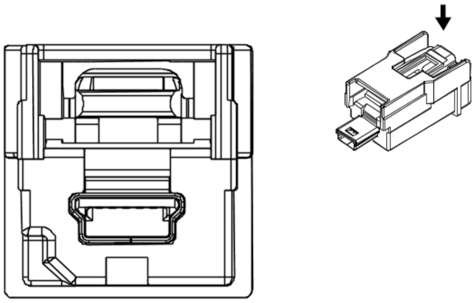
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

X92 USB Receptacle X1 (IOS/IOT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.35	RD / WH	1340	Battery Positive Voltage	I	—
2	0.35	YE	6817	LED Backlight Dimming Control 1	I	—
3	0.35	BK / WH	2751	Signal Ground	I	—
4 - 6	—	—	—	Not Occupied	—	—

X92 USB Receptacle X2 (IOR)



Connector Part Information

Harness Type: Instrument Panel Wiring Harness USB
OEM Connector: VP000193
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 5-Way M 2.0 Mini-B USB Type(GY)

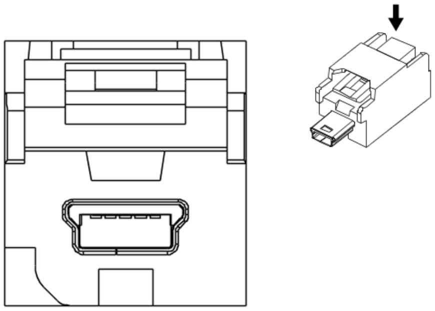
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X92 USB Receptacle X2 (IOR)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	USB	—	USB Serial Data	I	—

X92 USB Receptacle X2 (IOS/IOT)



3214018

Connector Part Information

Harness Type: Instrument Panel Wiring Harness USB
OEM Connector: 13890926
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 5-Way M 2.0 Mini-B USB Type(GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X92 USB Receptacle X2 (IOS/IOT)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
—	—	USB	—	USB Serial Data	I	—

X92 USB Receptacle X3

—

Connector Part Information

Harness Type: USB Receptacle Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Cable Assembly — See Part Catalog
Description: —

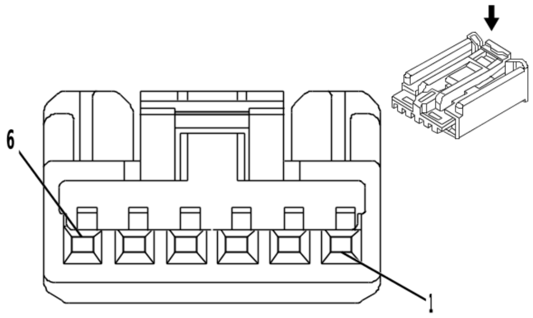
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X92 USB Receptacle X3

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	—	—	—	—	I	—

X92B USB Receptacle - Rear Seat (AZ3)



1862240

Connector Part Information

Harness Type: Front Floor Console Wiring Harness
OEM Connector: AIT2PB-06-1AK
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 Kaizen Series(BK)

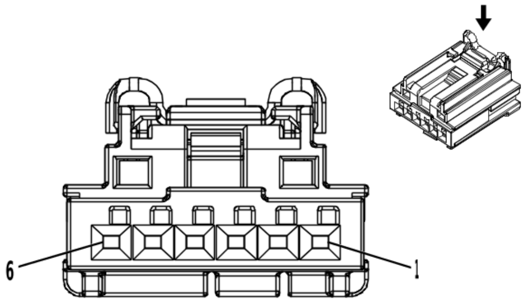
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

X92B USB Receptacle - Rear Seat (AZ3)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1 - 3	—	—	—	Not Occupied	—	—
4	0.5	BK	1150	Ground	I	—
5	—	—	—	Not Occupied	—	—
6	0.5	VT / YE	143	Accessory Ignition Voltage	I	—

X92C USB Receptacle - Center Console Rear (USS)



3960313

Connector Part Information

Harness Type: Front Floor Console Wiring Harness
OEM Connector: 13920633
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 0.64 Generation Y Series(BK)

Terminal Part Information

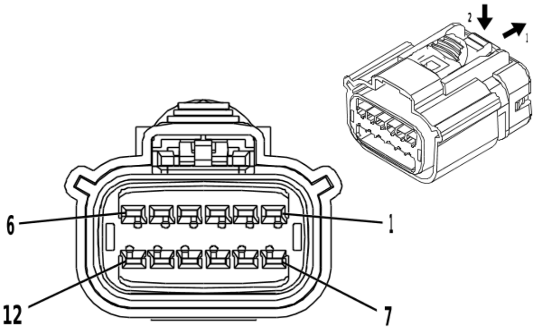
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-64B (L-BU)	No Tool Required

X92C USB Receptacle - Center Console Rear (USS)

Pin	Size	Color	Circuit	Function	Terminal Type ID	Option
1	0.5	VT / YE	143	Accessory Ignition Voltage	I	—
2	0.35 0.5	YE YE	6817 6817	LED Backlight Dimming Control 1 LED Backlight Dimming Control 1	I I	(A50/ D07) + (IOS/ IOT) (A50/ D07) - IOS- IOT
3	0.5	BK	1250	Ground	I	—
4 - 6	—	—	—	Not Occupied	—	—

Inline Harness Connector End Views

X101 Front Object Alarm Sensor Wiring Harness to Body Wiring Harness (T3U+UD5)



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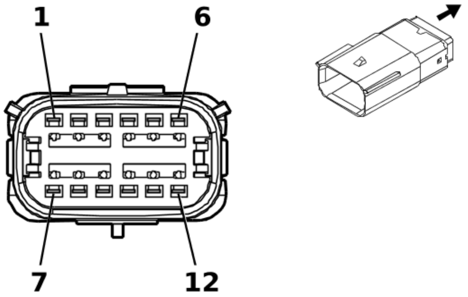


4862194

Connector Part Information

Harness Type: Front Object Alarm Sensor Wiring Harness
OEM Connector: 35246998
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 1.5 OCS Series, Sealed(BK)

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 15521147
Service Connector: 19371239
Description: 12-Way M 1.5 YESC Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	19352418	J-35616-3 (GY)	J-38125-215A

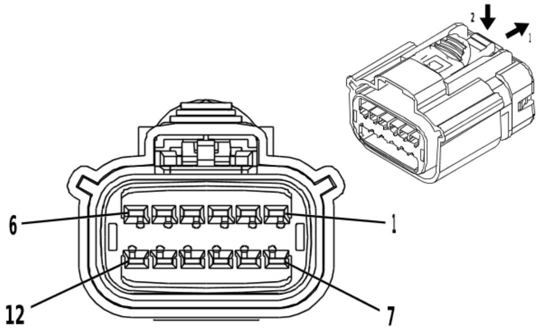
X101 Front Object Alarm Sensor Wiring Harness to Body Wiring Harness (T3U+UD5)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BK	250	I	—	Ground	1	0.5	BK	250	II	—
2	0.5	VT / GY	5218	I	—	Right Front Middle Parking Assist Sensor	2	0.5	VT / GY	5218	II	—
3	0.5	WH / GY	5217	I	—	Right Front Outer Parking Assist Sensor	3	0.5	WH / GY	5217	II	—
4	0.5	BK	150	I	—	Ground	4	0.75	BK	150	II	—
5	0.5	VT / WH	5215	I	—	Left Front Outer Parking Assist Sensor	5	0.5	VT / WH	5215	II	—
6	0.5	BK / BU	5214	I	—	Front Parking Assist Sensor Low Reference	6	0.5	BK / BU	5214	II	—
7	0.5	YE / GY	5216	I	—	Left Front Middle Parking Assist Sensor	7	0.5	YE / GY	5216	II	—

X101 Front Object Alarm Sensor Wiring Harness to Body Wiring Harness (T3U+UD5) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
8	0.5	YE / VT	5213	I	—	Front Left/Right/Middle Parking Assist Sensor	8	0.5	YE / VT	5213	II	—
9	0.5	BN / VT	2234	I	—	Front Fog Lamp Control	9	0.5	BN / VT	2234	II	—
10 - 12	—	—	—	—	—	Not Occupied	10 - 12	—	—	—	—	—

X101 Front Object Alarm Sensor Wiring Harness to Body Wiring Harness (T3U-UD5)



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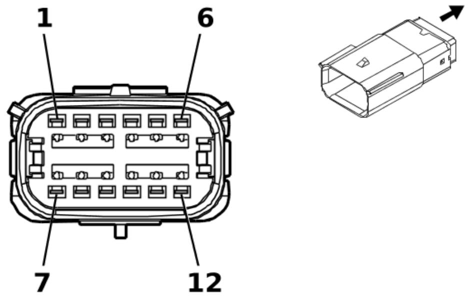


4862194

Connector Part Information

Harness Type: Front Object Alarm Sensor Wiring Harness
OEM Connector: 35247000
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 1.5 OCS Series, Sealed(BK)

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 15521147
Service Connector: 19371239
Description: 12-Way M 1.5 YESC Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	19352418	J-35616-3 (GY)	J-38125-215A

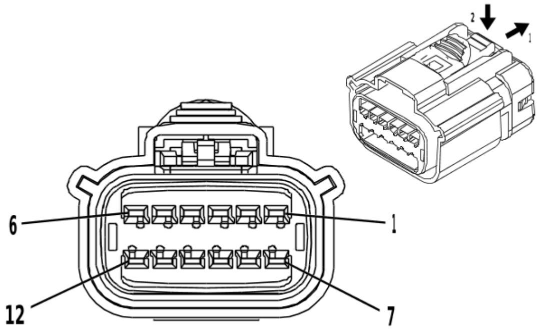
X101 Front Object Alarm Sensor Wiring Harness to Body Wiring Harness (T3U-UD5)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BK	250	I	—	Ground	1	0.5	BK	250	II	—
2	—	—	—	—	—	Right Front Middle Parking Assist Sensor	2	0.5	VT / GY	5218	II	—
3	—	—	—	—	—	Right Front Outer Parking Assist Sensor	3	0.5	WH / GY	5217	II	—
4	0.5	BK	150	I	—	Ground	4	0.75	BK	150	II	—
5	—	—	—	—	—	Left Front Outer Parking Assist Sensor	5	0.5	VT / WH	5215	II	—
6	—	—	—	—	—	Front Parking Assist Sensor Low Reference	6	0.5	BK / BU	5214	II	—
7	—	—	—	—	—	Left Front Middle Parking Assist Sensor	7	0.5	YE / GY	5216	II	—
8	—	—	—	—	—	Front Left/ Right/Middle Parking Assist Sensor	8	0.5	YE / VT	5213	II	—
9	0.5	BN / VT	2234	I	—	Front Fog Lamp Control	9	0.5	BN / VT	2234	II	—

X101 Front Object Alarm Sensor Wiring Harness to Body Wiring Harness (T3U-UD5) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
10 - 12	—	—	—	—	—	Not Occupied	10 - 12	—	—	—	—	—

X101 Front Object Alarm Sensor Wiring Harness to Body Wiring Harness (UD5-T3U)



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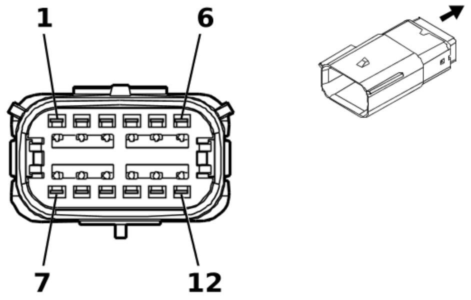


4862194

Connector Part Information

Harness Type: Front Object Alarm Sensor Wiring Harness
OEM Connector: 35246999
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way F 1.5 OCS Series, Sealed(BK)

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 15521147
Service Connector: 19371239
Description: 12-Way M 1.5 YESC Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	19352418	J-35616-3 (GY)	J-38125-215A

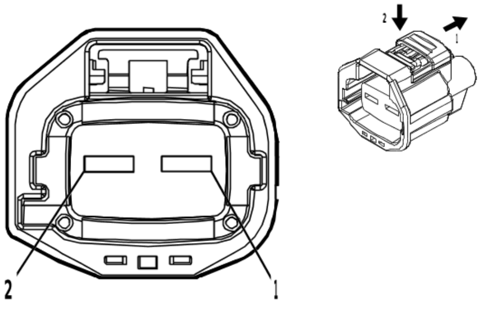
X101 Front Object Alarm Sensor Wiring Harness to Body Wiring Harness (UD5-T3U)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Ground	1	0.5	BK	250	II	—
2	0.5	VT / GY	5218	I	—	Right Front Middle Parking Assist Sensor	2	0.5	VT / GY	5218	II	—
3	0.5	WH / GY	5217	I	—	Right Front Outer Parking Assist Sensor	3	0.5	WH / GY	5217	II	—
4	—	—	—	—	—	Ground	4	0.75	BK	150	II	—
5	0.5	VT / WH	5215	I	—	Left Front Outer Parking Assist Sensor	5	0.5	VT / WH	5215	II	—
6	0.5	BK / BU	5214	I	—	Front Parking Assist Sensor Low Reference	6	0.5	BK / BU	5214	II	—
7	0.5	YE / GY	5216	I	—	Left Front Middle Parking Assist Sensor	7	0.5	YE / GY	5216	II	—
8	0.5	YE / VT	5213	I	—	Front Left/ Right/Middle Parking Assist Sensor	8	0.5	YE / VT	5213	II	—
9	—	—	—	—	—	Front Fog Lamp Control	9	0.5	BN / VT	2234	II	—

X101 Front Object Alarm Sensor Wiring Harness to Body Wiring Harness (UD5-T3U) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
10 - 12	—	—	—	—	—	Not Occupied	10 - 12	—	—	—	—	—

X103 Chassis Wiring Harness to Chassis Wiring Harness



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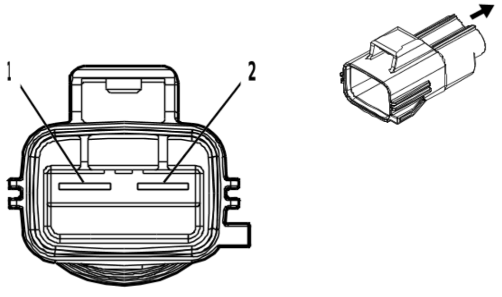


4789729

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 13888959
Service Connector: 19368222
Description: 2-Way F 6.3 Series, Sealed(D-GY)

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 35063672
Service Connector: 19368221
Description: 2-Way M 6.3 YESC Series, Sealed(GY)

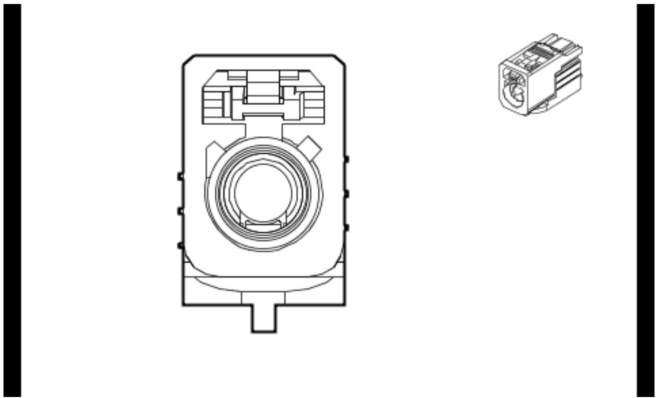
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-42 (RD)	No Tool Required
II	Not required	J-35616-43 (RD)	No Tool Required

X103 Chassis Wiring Harness to Chassis Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	4	RD / GN	742	I	—	Battery Positive Voltage	1	4	RD / GN	742	II	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—

X104 Frontview Camera Jumper Wiring Harness to Body Wiring Harness (UVS)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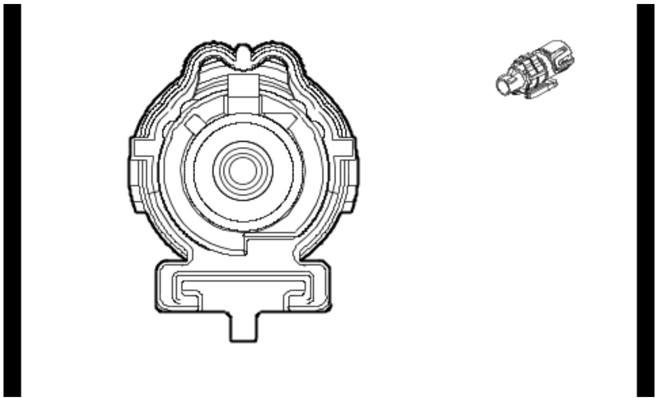

5758019

Connector Part Information

Harness Type: Frontview Camera Jumper Wiring Harness COAX

OEM Connector: Not Available

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way F

Connector Part Information

Harness Type: Body Wiring Harness COAX

OEM Connector: 33338239

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way M Coax Type, Sealed(BK)

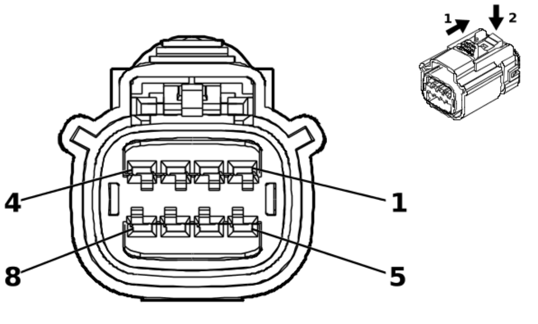
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X104 Frontview Camera Jumper Wiring Harness to Body Wiring Harness (UVS)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	Coax Cable	—	I	—	Front Vision Camera 1 Coaxial Video Signal	—	—	Coax Cable	—	I	—

X110 Body Wiring Harness to Front Headlamp Wiring Harness - Left Wiring Harness



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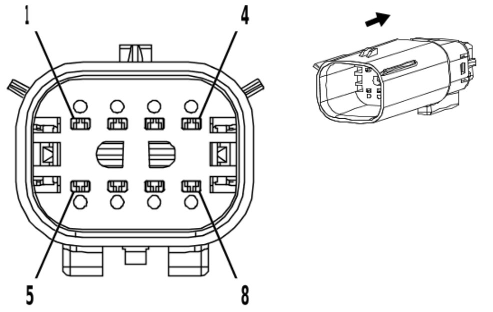


2667653

Connector Part Information

Harness Type: Body Wiring Harness

OEM Connector: 15514667

Service Connector: 84766296

Description: 8-Way F 1.5 OCS Series, Sealed(BK)

Connector Part Information

Harness Type: Front Headlamp Wiring Harness - Left Wiring Harness

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way M (BK)

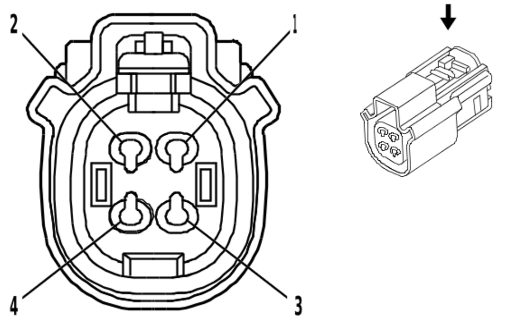
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	No Tool Required	No Tool Required

X110 Body Wiring Harness to Front Headlamp Wiring Harness - Left Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BK	150	I	—	Ground	1	0.75	BK	150	II	—
2	0.75	YE	2227	I	—	Left Headlamp Control	2	0.75	YE	2227	II	—
3	0.75	YE	712	I	—	Left Headlamp Low Beam Control	3	0.75	YE	712	II	—
4	0.75	WH	711	I	—	Left Headlamp High Beam Control	4	0.75	WH	711	II	—
5	0.5	VT / GY	709	I	—	Left Park Lamp Control	5	0.5	VT / GY	709	II	—
6	0.35	VT / BK	6568	I	—	Front Turn Signal Lamp Feedback Signal	6	0.35	VT / BK	6568	II	—
7	0.5	BU / WH	1314	I	—	Left Front Turn Signal Lamp Control	7	0.5	BU / WH	1314	II	—
8	0.35	GY / BU	7538	I	—	Left Front DRL Control	8	0.35	GY / BU	7538	II	—

X111 Engine Wiring Harness to Transfer Case Selector Shift Control Switch Wiring Harness Extension Harness (NQF/NQH)



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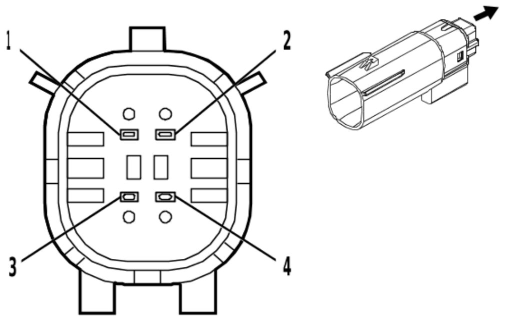


2368875

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 33346391
Service Connector: 19368217
Description: 4-Way F 1.5 MX Series, Sealed(BK)

Connector Part Information

Harness Type: Transfer Case Selector Shift Control Switch Wiring Harness Extension Harness
OEM Connector: 33344515
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M 1.5 MX Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required
II	Not required	J-35616-2A (GY)	No Tool Required
III	Not required	J-35616-3 (GY)	No Tool Required

X111 Engine Wiring Harness to Transfer Case Selector Shift Control Switch Wiring Harness Extension Harness (NQF/NQH)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1.5 1	BK BK	4450 4450	I II	L5P L8T	Ground Ground	1	0.5	BK	4450	III	—
2	0.5	YE / WH	1695	II	—	4WD Locked Range Indicator Control	2	0.5	YE / WH	1695	III	—
3	0.5	VT / BK	2139	II	—	Run/Crank Ignition 1 Voltage	3	0.5	VT / BK	2139	III	—
4	0.5	GY / BK	1570	II	—	Front Axle Actuator Control	4	0.5	GY / BK	1570	III	—

X113 Left Front Auxiliary Lamp Wiring Harness to Left Front Fender Lamp Wiring Harness (Z88)

—

Connector Part Information

Harness Type: Left Front Auxiliary Lamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F

—

Connector Part Information

Harness Type: Left Front Fender Lamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M

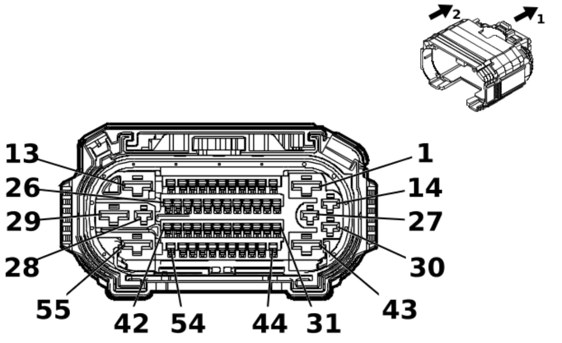
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
II	Not required	No Tool Required	No Tool Required

X113 Left Front Auxiliary Lamp Wiring Harness to Left Front Fender Lamp Wiring Harness (Z88)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
2	— —	VT / GY BK	709 150	I I	Z88+ (GFF/ GFI) Z88+ (GFU/ GFG/ GFW)	Left Park Lamp Control Ground	2	— —	VT / GY BK	709 150	II II	Z88+ (GFF/ GFI) Z88+ (GFU/ GFG/ GFW)
5	— —	BK VT / GY	150 709	I I	Z88+ (GFF/ GFI) Z88+ (GFU/ GFG/ GFW)	Ground Left Park Lamp Control	5	— —	BK VT / GY	150 709	II II	Z88+ (GFF/ GFI) Z88+ (GFU/ GFG/ GFW)

X115 Body Wiring Harness to Engine Wiring Harness (L5P)



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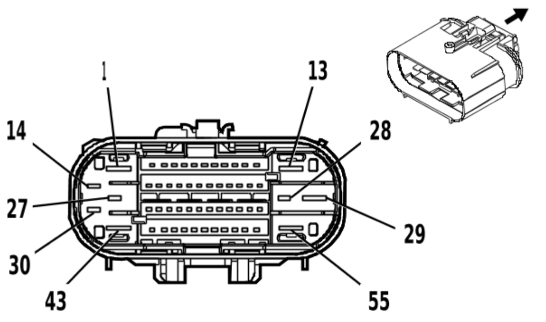


4994369

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35347512
Service Connector: 19371184
Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(GY)

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 35293246
Service Connector: 84727363
Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19332901	J-35616-35 (VT)	J-38125-212
II	19370818	J-35616-12 (BU)	J-38125-215A
III	19371217	J-35616-12 (BU)	J-38125-215A
IV	84634921	J-35616-42 (RD)	J-38125-212
V	84847992	J-35616-32 (OG)	J-38125-36
VI	84867140	J-35616-13 (BU)	J-38125-215A
VII	84867141	J-35616-13 (BU)	J-38125-215A

X115 Body Wiring Harness to Engine Wiring Harness (L5P)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1 - 2	—	—	—	—	—	Not Occupied	1 - 2	—	—	—	—	—
3	0.35	BK / BU	1271	II	—	Accelerator Pedal Position Low Reference 1	3	0.5	BK / BU	1271	VI	—
4	0.35	BN / WH	419	II	—	Check Engine Indicator Control	4	0.5	BN / WH	419	VI	—
5	0.35	GN / WH	1162	II	—	Accelerator Pedal Position Signal 2	5	0.5	GN / WH	1162	VI	—
6	0.35	GN / BN	507	II	—	Wait To Start Indicator Control	6	0.5	GN / BN	507	VI	—
7	0.5	RD / VT	2640	II	—	Battery Positive Voltage	7	0.75	RD / VT	2640	VI	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

X115 Body Wiring Harness to Engine Wiring Harness (L5P) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
9	0.35	VT / WH	239	II	—	Run/Crank Ignition 1 Voltage	9	0.5	VT / WH	239	VI	—
10	0.5	RD / BU	4540	II	—	Battery Positive Voltage	10	0.75	RD / BU	4540	VI	—
11	0.5	BU / YE	68	II	—	Low Coolant Level Indicator Control	11	0.5	BU / YE	68	VI	—
12	1 1	GN / WH BK	488 9003	III III	PTO - PTO	Power Take-Off Control Switch Signal —	12	0.75 1	GN / WH BK	488 9003	VI VII	PTO - PTO
13	0.35	BN / GN	4311	IV	—	Power Take-Off Enable Cabin Switch Normally Closed Signal	13	0.5	BN / GN	4311	V	—
14	—	—	—	—	—	Not Occupied	14	—	—	—	—	—
15	0.35	YE	4063	II	—	Hood Status A Signal	15	—	—	—	—	—
16	0.5	VT / GN	439	II	—	Run/Crank Ignition 1 Voltage	16	0.5	VT / GN	439	VI	—
17	0.35	WH / BU	5986	II	—	Serial Data Communication Enable	17	0.5	WH / BU	5986	VI	—
18	0.35	BK / GY	2204	II	—	Enhanced Driver Mode 1 Switch Low Reference	18	0.5	BK / VT	3109	VI	—
19	0.35	WH / BN	2203	II	—	Enhanced Driver Mode 2 Switch Signal	19	0.5	WH / BN	2203	VI	—
20	0.35	GY	4109	II	—	Driver Mode Switch 5V Reference	20	0.5	GY	4109	VI	—
21	—	—	—	—	—	Not Occupied	21	—	—	—	—	—
22	0.35	VT / YE	5985	II	—	Accessory Wake-Up Serial Data	22	0.5	VT / YE	5985	VI	—
23 - 25	—	—	—	—	—	Not Occupied	23 - 25	—	—	—	—	—
26	0.35	BU / GY	636	II	—	Ambient Air Temperature Sensor Signal	26	0.5	BU / GY	636	VI	—
27	0.35	VT / BN	300	I	—	Run Ignition 3 Voltage	27	—	—	—	—	—
28 - 30	—	—	—	—	—	Not Occupied	28 - 30	—	—	—	—	—
31	0.35	WH / BU	6311	II	—	Cruise/ETC/TCC Brake Signal	31	0.5	WH / BU	6311	VI	—

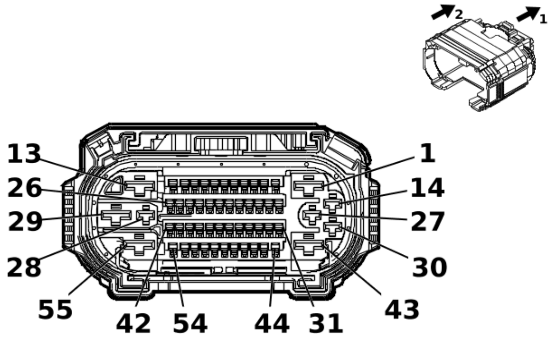
X115 Body Wiring Harness to Engine Wiring Harness (L5P) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
32	0.35	VT / BU	6091	II	—	Crankshaft Position Sensor Replicated Signal	32	0.5	VT / BU	6091	VI	—
33	0.35	BN	1560	II	—	Neutral Indicator Control	33	0.5	BN	1560	VI	—
34	—	—	—	—	—	Not Occupied	34	—	—	—	—	—
35	0.35	BK / YE	5382	II	—	Brake Position Sensor Low Reference	35	0.5	BK / YE	5382	VI	—
36	0.35	WH / GN	5380	II	—	Brake Position Sensor Signal	36	0.5	WH / GN	5380	VI	—
37	0.35	WH / RD	5381	II	—	Brake Position Sensor 5V Reference	37	0.5	WH / RD	5381	VI	—
38	0.5	BU	2500	II	—	High Speed GMLAN Serial Data [+] 1	38	0.5	BU	2500	VI	—
39	0.5	WH	2501	II	—	High Speed GMLAN Serial Data [-] 1	39	0.5	WH	2501	VI	—
40	0.35	BK / VT	1272	II	—	Accelerator Pedal Position Low Reference 2	40	0.5	BK / VT	1272	VI	—
41 - 42	—	—	—	—	—	Not Occupied	41 - 42	—	—	—	—	—
43	4	BK / WH	2251	IV	—	Signal Ground	43	4	BK / WH	451	V	—
44	1	RD / GN	1840	III	—	Battery Positive Voltage	44	1.5	RD / GN	1840	VII	—
45	0.5	GY / BN	7065	II	—	Right Front Wheel Speed Sensor Control	45	0.5	GY / BN	7065	VI	—
46	0.35	BK / GN	580	II	—	Engine Control Sensors Low Reference 2	46	0.5	BK / BU	61	VI	—
47	0.35	BU / BN	7573	II	—	A/C Compressor Solenoid Valve Control	47	0.5	BU / BN	7573	VI	—
48	—	—	—	—	—	Not Occupied	48	—	—	—	—	—
49	0.35	YE / WH	1161	II	—	Accelerator Pedal Position Signal 1	49	0.5	YE / WH	1161	VI	—
50	0.35	WH / RD	1164	II	—	Accelerator Pedal Position 5V Reference 1	50	0.5	WH / RD	1164	VI	—

X115 Body Wiring Harness to Engine Wiring Harness (L5P) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
51	0.35	BN / RD	1274	II	—	Accelerator Pedal Position 5V Reference 2	51	0.5	BN / RD	1274	VI	—
52	0.5	YE	872	II	—	Right Front Wheel Speed Sensor Signal	52	0.5	YE	872	VI	—
53	0.35	BU / YE	7574	II	—	A/C Compressor Solenoid Valve Control	53	0.5	BU / YE	7574	VI	—
54 - 55	—	—	—	—	—	Not Occupied	54 - 55	—	—	—	—	—

X115 Body Wiring Harness to Engine Wiring Harness (L8T)



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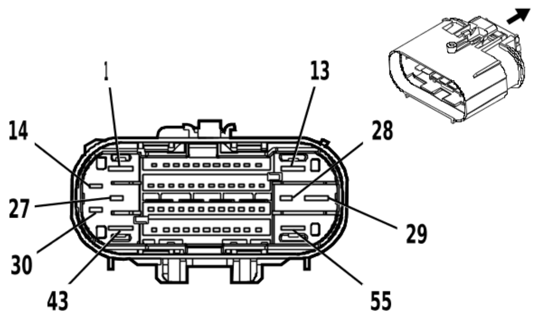


4994369

Connector Part Information

Harness Type: Body Wiring Harness

OEM Connector: 35347512

Service Connector: 19371184

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(GY)

Connector Part Information

Harness Type: Engine Wiring Harness

OEM Connector: 35293247

Service Connector: 84727363

Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19332901	J-35616-35 (VT)	J-38125-212
II	19370818	J-35616-12 (BU)	J-38125-215A
III	19371217	J-35616-12 (BU)	J-38125-215A
IV	84634921	J-35616-42 (RD)	J-38125-212
V	84847992	J-35616-32 (OG)	J-38125-36
VI	84867140	J-35616-13 (BU)	J-38125-215A
VII	84867141	J-35616-13 (BU)	J-38125-215A
VIII	84992391	J-35616-5 (PU)	J-38125-215A

X115 Body Wiring Harness to Engine Wiring Harness (L8T)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1 - 2	—	—	—	—	—	Not Occupied	1 - 2	—	—	—	—	—
3	0.35	BK / BU	1271	II	—	Accelerator Pedal Position Low Reference 1	3	0.5	BK / BU	1271	VI	—
4	0.35	BN / WH	419	II	—	Check Engine Indicator Control	4	0.5	BN / WH	419	VI	—
5	0.35	GN / WH	1162	II	—	Accelerator Pedal Position Signal 2	5	0.5	GN / WH	1162	VI	—
6	0.35	GN / BN	507	II	—	Wait To Start Indicator Control	6	0.35	GN / BN	507	VI	—
7	0.5	RD / VT	2640	II	—	Battery Positive Voltage	7	0.5	RD / VT	2640	VI	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

X115 Body Wiring Harness to Engine Wiring Harness (L8T) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
9	0.35	VT / WH	239	II	—	Run/Crank Ignition 1 Voltage	9	0.35	VT / WH	239	VI	—
10	0.5	RD / BU	4540	II	—	Battery Positive Voltage	10	0.5	RD / BU	4540	VI	—
11	0.5	BU / YE	68	II	—	Low Coolant Level Indicator Control	11	0.5	BU / YE	68	VI	—
12	1 1	GN / WH BK	488 9003	III III	PTO - PTO	Power Take-Off Control Switch Signal —	12	1 1	GN / WH BK	488 9003	VII VII	PTO - PTO
13	0.35	BN / GN	4311	IV	—	Power Take-Off Enable Cabin Switch Normally Closed Signal	13	0.35	BN / GN	4311	VI	—
14	—	—	—	—	—	Not Occupied	14	—	—	—	—	—
15	0.35	YE	4063	II	—	Hood Status A Signal	15	0.5	YE	4063	VI	—
16	0.5	VT / GN	439	II	—	Run/Crank Ignition 1 Voltage	16	0.5	VT / GN	439	VI	—
17	0.35	WH / BU	5986	II	—	Serial Data Communication Enable	17	0.5	WH / BU	5986	VI	—
18	0.35	BK / GY	2204	II	—	Enhanced Driver Mode 1 Switch Low Reference	18	0.5	BK / GY	626	VI	—
19	0.35	WH / BN	2203	II	—	Enhanced Driver Mode 2 Switch Signal	19	0.5	WH / BN	2203	VI	—
20	0.35	GY	4109	II	—	Driver Mode Switch 5V Reference	20	0.5	BU / RD	460	VI	—
21	—	—	—	—	—	Not Occupied	21	—	—	—	—	—
22	0.35	VT / YE	5985	II	—	Accessory Wake-Up Serial Data	22	0.5	VT / YE	5985	VI	—
23 - 25	—	—	—	—	—	Not Occupied	23 - 25	—	—	—	—	—
26	0.35	BU / GY	636	II	—	Ambient Air Temperature Sensor Signal	26	0.5	BU / GY	636	VI	—
27	0.35	VT / BN	300	I	—	Run Ignition 3 Voltage	27	0.5	VT / BN	300	VIII	—
28 - 30	—	—	—	—	—	Not Occupied	28 - 30	—	—	—	—	—
31	0.35	WH / BU	6311	II	—	Cruise/ETC/ TCC Brake Signal	31	0.5	WH / BU	6311	VI	—

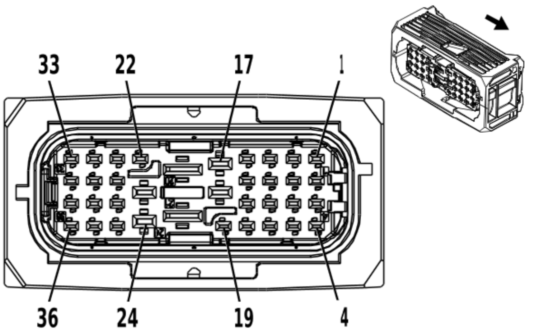
X115 Body Wiring Harness to Engine Wiring Harness (L8T) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
32	0.35	VT / BU	6091	II	—	Crankshaft Position Sensor Replicated Signal	32	0.5	VT / BU	6091	VI	—
33	0.35	BN	1560	II	—	Neutral Indicator Control	33	0.5	BN	1560	VI	—
34	—	—	—	—	—	Not Occupied	34	—	—	—	—	—
35	0.35	BK / YE	5382	II	—	Brake Position Sensor Low Reference	35	0.5	BK / GY	626	VI	—
36	0.35	WH / GN	5380	II	—	Brake Position Sensor Signal	36	0.5	WH / GN	5380	VI	—
37	0.35	WH / RD	5381	II	—	Brake Position Sensor 5V Reference	37	0.5	WH / RD	480	VI	—
38	0.5	BU	2500	II	—	High Speed GMLAN Serial Data [+] 1	38	0.5	BU	2500	VI	—
39	0.5	WH	2501	II	—	High Speed GMLAN Serial Data [-] 1	39	0.5	WH	2501	VI	—
40	0.35	BK / VT	1272	II	—	Accelerator Pedal Position Low Reference 2	40	0.5	BK / VT	1272	VI	—
41 - 42	—	—	—	—	—	Not Occupied	41 - 42	—	—	—	—	—
43	4	BK / WH	2251	IV	—	Signal Ground	43	4	BK / WH	451	V	—
44	1	RD / GN	1840	III	—	Battery Positive Voltage	44	1.5	RD / GN	1840	VII	—
45	0.5	GY / BN	7065	II	—	Right Front Wheel Speed Sensor Control	45	0.5	GY / BN	7065	VI	—
46	0.35	BK / GN	580	II	—	Engine Control Sensors Low Reference 2	46	0.5	BK / GN	580	VI	—
47	0.35	BU / BN	7573	II	—	A/C Compressor Solenoid Valve Control	47	0.5	BU / BN	7573	VI	—
48	—	—	—	—	—	Not Occupied	48	—	—	—	—	—
49	0.35	YE / WH	1161	II	—	Accelerator Pedal Position Signal 1	49	0.5	YE / WH	1161	VI	—
50	0.35	WH / RD	1164	II	—	Accelerator Pedal Position 5V Reference 1	50	0.5	WH / RD	1164	VI	—

X115 Body Wiring Harness to Engine Wiring Harness (L8T) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
51	0.35	BN / RD	1274	II	—	Accelerator Pedal Position 5V Reference 2	51	0.5	BN / RD	1274	VI	—
52	0.5	YE	872	II	—	Right Front Wheel Speed Sensor Signal	52	0.5	YE	872	VI	—
53	0.35	BU / YE	7574	II	—	A/C Compressor Solenoid Valve Control	53	0.5	BU / YE	7574	VI	—
54 - 55	—	—	—	—	—	Not Occupied	54 - 55	—	—	—	—	—

X116 Engine Wiring Harness to Engine Wiring Harness (L5P)



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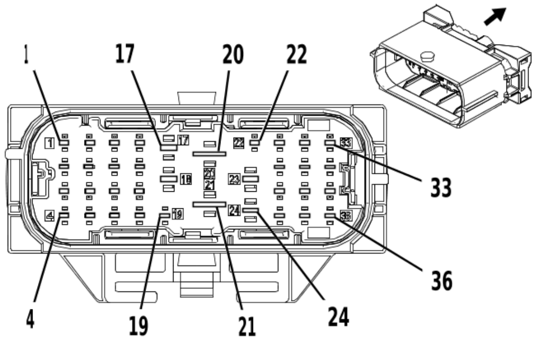


3960400

Connector Part Information

Harness Type: Engine Wiring Harness

OEM Connector: 13929980

Service Connector: 19333092

Description: 36-Way F 1.5, 2.8 CTS, 6.3 MCP Series, Sealed(BK)

Connector Part Information

Harness Type: Engine Wiring Harness

OEM Connector: 13594541

Service Connector: 19330685

Description: 36-Way M 1.5, 2.8, 5.8 Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19368624	J-35616-35 (VT)	J-38125-212
II	19369235	J-35616-14 (GN)	EL-38125-560A
III	13575364	J-35616-5 (PU)	J-38125-36
IV	19303873	J-35616-3 (GY)	EL-38125-560A

X116 Engine Wiring Harness to Engine Wiring Harness (L5P)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BU / BN	4498	II	—	High Speed GMLAN Serial Data [+] 7	1	0.5	BU / BN	4498	IV	L5P
2	0.5	WH	4499	II	—	High Speed GMLAN Serial Data [-] 7	2	0.5	WH	4499	IV	L5P
3	0.5	BU	2500	II	—	High Speed GMLAN Serial Data [+] 1	3	0.5	BU	2500	IV	L5P
4	0.5	WH	2501	II	—	High Speed GMLAN Serial Data [-] 1	4	0.5	WH	2501	IV	L5P
5	0.5	BK / BN	6782	II	—	Exhaust Gas Temperature Sensor 1 Low Reference	5	0.5	BK / BN	6782	IV	L5P
6	0.5	BU / WH	5277	II	—	Exhaust Gas Temperature Sensor 1 Signal	6	0.5	BU / WH	5277	IV	L5P

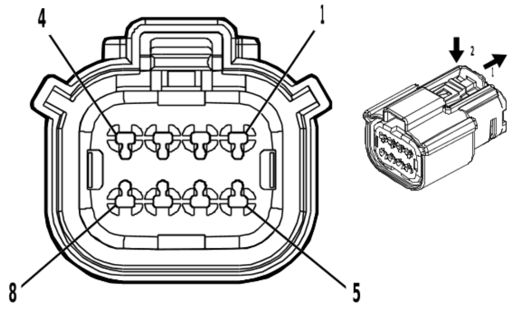
X116 Engine Wiring Harness to Engine Wiring Harness (L5P) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
7	0.5	BK / BU	6783	II	—	Exhaust Gas Temperature Sensor 2 Low Reference	7	0.5	BK / BU	6783	IV	L5P
8	0.5	BU / GN	5377	II	—	Exhaust Gas Temperature Sensor 2 Signal	8	0.5	BU / GN	5377	IV	L5P
9	0.5	BK / BU	6274	II	—	Exhaust Gas Recirculation Temperature Sensor Low Reference	9	0.5	BK / BU	6274	IV	L5P
10	0.5	WH / BN	3237	II	—	Exhaust Gas Recirculation Temperature Sensor Signal	10	0.5	WH / BN	3237	IV	L5P
11	0.5	BK / YE	6275	II	—	Exhaust Gas Recirculation Temperature Sensor 2 Low Reference	11	0.5	BK / YE	6275	IV	L5P
12	0.5	YE / GN	3236	II	—	Exhaust Gas Recirculation Temperature Sensor 2 Signal	12	0.5	YE / GN	3236	IV	L5P
13	0.5	YE / BK	3682	II	—	Charge Air Cooler Inlet Temperature Sensor Low Reference	13	0.5	YE / BK	3682	IV	L5P
14	0.5	GN	3683	II	—	Charge Air Cooler Inlet Temperature Sensor Signal	14	0.5	GN	3683	IV	L5P
15	0.5	BN / BK	2929	II	—	Fuel Metering Solenoid Valve Low Control	15	0.5	BN / BK	2929	IV	L5P
16	0.5	YE	2928	II	—	Fuel Metering Solenoid Valve High Control	16	0.5	YE	2928	IV	L5P
17	0.5	VT / YE	5985	I	—	Accessory Wake-Up Serial Data	17	0.5	VT / YE	5985	III	L5P
18	0.5	VT / BK	2139	I	—	Run/Crank Ignition 1 Voltage	18	0.5	VT / BK	2139	III	L5P
19 - 21	—	—	—	—	—	Not Occupied	19 - 21	—	—	—	—	—
22	0.5	VT / BU	3674	II	—	NOx Sensor 1 Control	22	0.5	VT / BU	3674	IV	L5P
23	0.5	GY	23	I	—	Generator Field Duty Cycle Signal	23	0.5	GY	23	III	L5P

X116 Engine Wiring Harness to Engine Wiring Harness (L5P) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
24	0.75	BN	25	I	—	Charge Indicator Control	24	0.5	BN	25	III	L5P
25 - 27	—	—	—	—	—	Not Occupied	25 - 27	—	—	—	—	—
28	0.5	VT / BU	6091	II	—	Crankshaft Position Sensor Replicated Signal	28	0.5	VT / BU	6091	IV	L5P
29	—	—	—	—	—	Not Occupied	29	—	—	—	—	—
30	0.5	BU / GN	7071	II	—	Fuel Heater Control	30	0.5	BU / GN	7071	IV	L5P
31	0.5	VT / BN	2927	II	—	Exhaust Aftertreatment Fuel Injector Low Control	31	0.5	VT / BN	2927	IV	L5P
32	0.5	BN / BU	2926	II	—	Exhaust Aftertreatment Fuel Injector High Control	32	0.5	BN / BU	2926	IV	L5P
33	0.5	BU / BN	4498	II	—	High Speed GMLAN Serial Data [+] 7	33	0.5	BU / BN	4498	IV	L5P
34	0.5	WH	4499	II	—	High Speed GMLAN Serial Data [-] 7	34	0.5	WH	4499	IV	L5P
35	0.5	BU	2500	II	—	High Speed GMLAN Serial Data [+] 1	35	0.5	BU	2500	IV	L5P
36	0.5	WH	2501	II	—	High Speed GMLAN Serial Data [-] 1	36	0.5	WH	2501	IV	L5P

X118 Engine Wiring Harness to Engine Jumper Wiring Harness (L5P)



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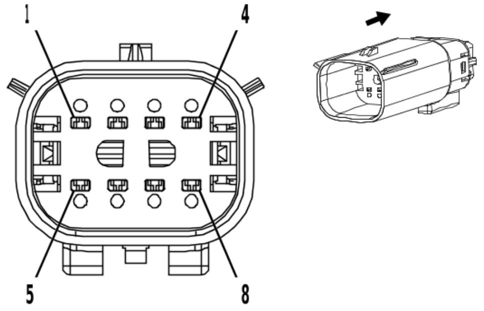


2667653

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13520069
Service Connector: 84928314
Description: 8-Way F 1.5 MX Series, Sealed(BK)

Connector Part Information

Harness Type: Engine Jumper Wiring Harness
OEM Connector: 13520577
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M 1.5 MX Series, Sealed(BK)

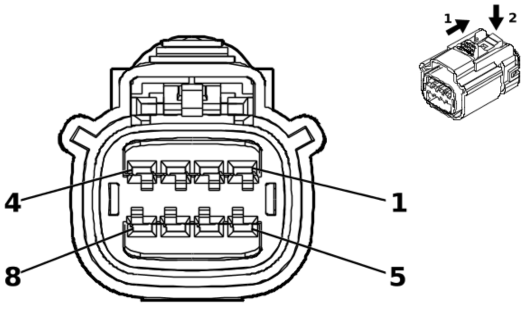
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required
II	Not required	J-35616-3 (GY)	No Tool Required

X118 Engine Wiring Harness to Engine Jumper Wiring Harness (L5P)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT / BU	6270	I	L5P	Crankshaft Position Sensor Voltage	1	0.5	VT / BU	6270	II	L5P
2	0.5	BK / VT	6272	I	L5P	Crankshaft Position Sensor Low Reference	2	0.5	BK / VT	6272	II	L5P
3	0.5	GN	6271	I	L5P	Crankshaft Position Sensor Signal	3	0.5	GN	6271	II	L5P
4	0.5	BN / RD	2917	I	L5P	Fuel Rail Pressure Sensor 5V Reference	4	0.5	BN / RD	2917	II	L5P
5	0.5	BK / GN	2919	I	L5P	Fuel Rail Pressure Sensor Low Reference	5	0.5	BK / GN	2919	II	L5P
6	0.5	BU / WH	2918	I	L5P	Fuel Rail Pressure Sensor Signal	6	0.5	BU / WH	2918	II	L5P
7	0.5	BN / YE	2161	I	L5P	Fuel Rail Pressure Sensor 2 Signal	7	0.5	BN / YE	2161	II	L5P
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

X120 Body Wiring Harness to Front Headlamp Wiring Harness - Right



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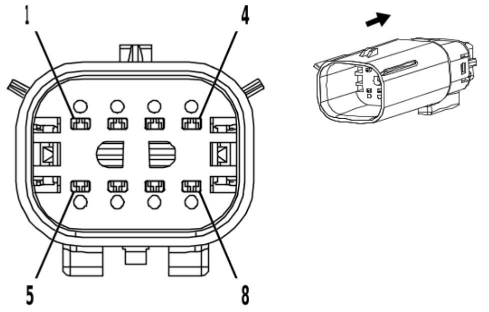

2667653

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 15514667
Service Connector: 84766296
Description: 8-Way F 1.5 OCS Series, Sealed(BK)

Connector Part Information

Harness Type: Front Headlamp Wiring Harness - Right
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	No Tool Required	No Tool Required

X120 Body Wiring Harness to Front Headlamp Wiring Harness - Right

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BK	250	I	—	Ground	1	0.75	BK	250	II	—
2	0.75	YE / GY	2226	I	—	Right Headlamp Control	2	0.75	YE / GY	2226	II	—
3	1	YE	312	I	—	Right Headlamp Low Beam Control	3	1	YE	312	II	—
4	0.75	WH	311	I	—	Right Headlamp High Beam Control	4	0.75	WH	311	II	—
5	0.5	GY / BN	309	I	—	Right Park Lamp Control	5	0.5	GY / BN	309	II	—
6	0.35	WH / YE	7545	I	—	Right Front Turn Signal Lamp Feedback Signal	6	0.35	WH / YE	7545	II	—
7	0.5	GN / VT	1315	I	—	Right Front Turn Signal Lamp Control	7	0.5	GN / VT	1315	II	—
8	0.35	BU / BN	7539	I	—	Right Front DRL Control	8	0.35	BU / BN	7539	II	—

X123 Right Front Auxiliary Lamp Wiring Harness to Right Front Headlamp Wiring Harness (Z88)

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Connector Part Information

Harness Type: Right Front Auxiliary Lamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F

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Connector Part Information

Harness Type: Right Front Headlamp Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M

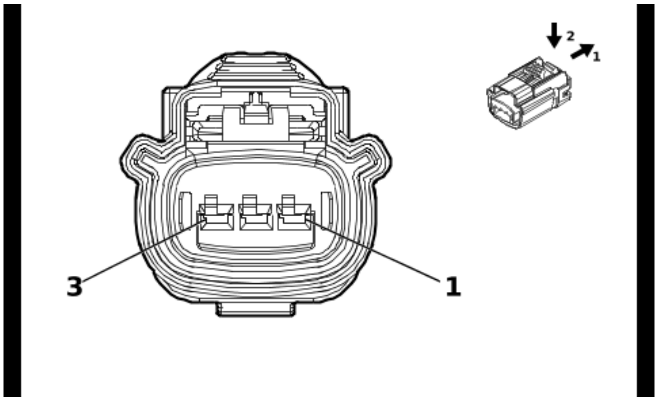
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
II	Not required	No Tool Required	No Tool Required

X123 Right Front Auxiliary Lamp Wiring Harness to Right Front Headlamp Wiring Harness (Z88)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
2	— — —	BK GY / BN BK	250 309 250	I I I	— Z88+ (GFF/ GFI) Z88+ (GFU/ GFG/ GFW)	Ground Right Park Lamp Control Ground	2	— — —	BK GY / BN BK	250 309 250	II II II	— Z88+ (GFF/ GFI) Z88+ (GFU/ GFG/ GFW)
5	— — —	GY / BN GY / BN BK	309 309 250	I I I	— Z88+ (GFF/ GFI) Z88+ (GFU/ GFG/ GFW)	Right Park Lamp Control Right Park Lamp Control Ground	5	— — —	GY / BN GY / BN BK	309 309 250	II II II	— Z88+ (GFF/ GFI) Z88+ (GFU/ GFG/ GFW)

X132 Engine Wiring Harness to Active Air Grille Shutter Jumper Wiring Harness



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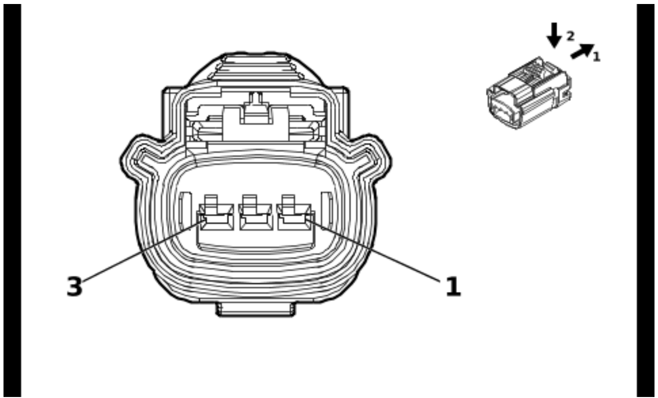

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Connector Part Information

Harness Type: Engine Wiring Harness

OEM Connector: 15514762

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way F 1.5 YESC Series, Sealed(BK)

Connector Part Information

Harness Type: Active Air Grille Shutter Jumper Wiring Harness

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 3-Way M (BK)

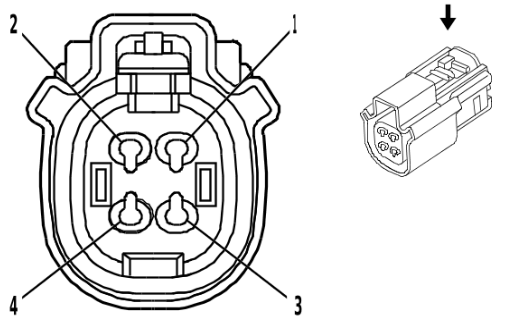
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required
II	Not required	J-35616-2A (GY)	No Tool Required
III	Not required	No Tool Required	No Tool Required

X132 Engine Wiring Harness to Active Air Grille Shutter Jumper Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT / BU	5705	II	—	Powertrain Main Relay Control	1	0.5	VT / BU	5705	III	—
2	0.5	GN / VT	4621	II	—	Engine Control Module LIN Bus 1	2	0.5	GN / VT	4621	III	—
3	1.5 1	BK BK	4450 4450	I II	L5P L8T	Ground Ground	3	1.5 1	BK BK	4450 4450	III III	L5P L8T

X133 Active Grille Air Shutter 1 Actuator Jumper Wiring Harness to Active Grille Air Shutter 2 Actuator Jumper Wiring Harness (WMI)



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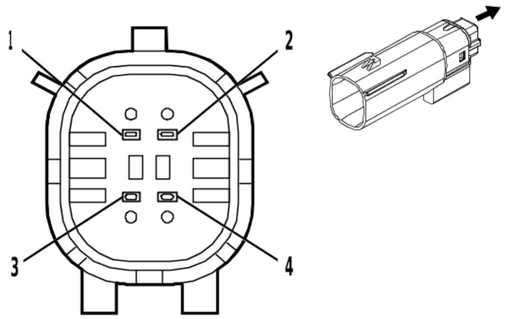

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Connector Part Information

Harness Type: Active Grille Air Shutter 1 Actuator Jumper Wiring Harness

OEM Connector: 1005433

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 1.5 MX Series, Sealed(BK)

Connector Part Information

Harness Type: Active Grille Air Shutter 2 Actuator Jumper Wiring Harness

OEM Connector: 1005434

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M 1.5 MX Series, Sealed(BK)

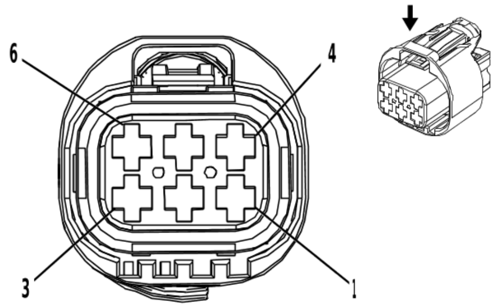
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
II	Not required	No Tool Required	No Tool Required

X133 Active Grille Air Shutter 1 Actuator Jumper Wiring Harness to Active Grille Air Shutter 2 Actuator Jumper Wiring Harness (WMI)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT / BU	5705	I	—	Powertrain Main Relay Control	1	0.5	VT / BU	5705	II	—
2	0.5	GN / VT	4621	I	—	Engine Control Module LIN Bus 1	2	0.5	GN / VT	4621	II	—
3	0.5	BK	4450	I	—	Ground	3	0.5	BK	4450	II	—
4	1.5	BK	4450	I	—	Ground	4	1.5	BK	4450	II	—

X136 Engine Wiring Harness to Auxiliary Battery Wiring Harness (K4B)



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2042938

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 10866617
Service Connector: 19332889
Description: 6-Way F 2.8 Junior Power Timer Series, Sealed(GY)

Connector Part Information

Harness Type: Auxiliary Battery Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way M (GY)

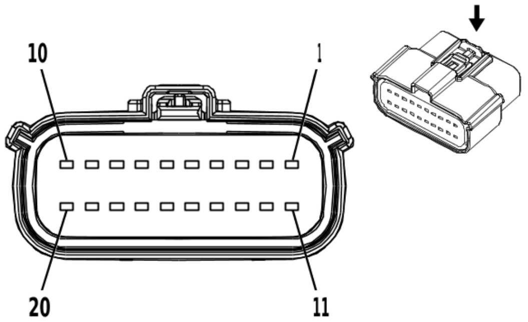
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required
II	Not required	No Tool Required	No Tool Required

X136 Engine Wiring Harness to Auxiliary Battery Wiring Harness (K4B)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT / BN	300	I	—	Run Ignition 3 Voltage	1	0.5	VT / BN	300	II	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.5	RD / WH	3440	I	—	Battery Positive Voltage	3	0.5	RD / WH	3440	II	—
4	1	BK	4450	I	—	Ground	4	1	BK	4450	II	—
5 - 6	—	—	—	—	—	Not Occupied	5 - 6	—	—	—	—	—

X138 Body Wiring Harness to Chassis Wiring Harness



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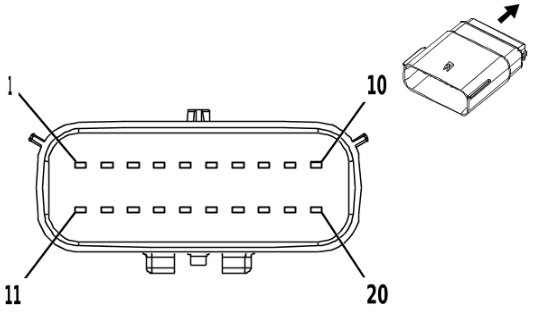


2871861

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 13650143
Service Connector: 19300557
Description: 20-Way F 1.5 MX Series, Sealed(BK)

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 35355179
Service Connector: 19351705
Description: 20-Way M 1.5 MX Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19368973	J-35616-2A (GY)	J-38125-217
II	19331234	J-35616-14 (GN)	J-38125-557

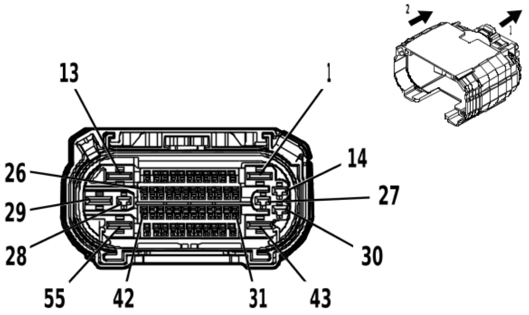
X138 Body Wiring Harness to Chassis Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT / GN	1739	I	—	Run/Crank Ignition 1 Voltage	1	0.5	VT / GN	1739	II	—
2	0.35	BN / WH	7462	I	—	Running Board Steps Disable Signal	2	—	—	—	—	—
3	0.35	WH / BU	6973	I	—	Rearview Camera Signal [-]	3	0.5	WH / BU	6973	II	—
4	0.75	GN / BN	2266	I	—	DC/AC Inverter Control 2	4	—	—	—	—	—
5	0.5	VT / WH	5065	I	—	Stop Lamp Relay Coil Control	5	—	—	—	—	—
6	0.35	GN	5060	I	—	Low Speed GMLAN Serial Data	6	—	—	—	—	—
7	0.5	BN / GN	3568	I	—	Rear Closure Passive Entry Antenna High Signal	7	—	—	—	—	—
8	0.75	BK / WH	2264	I	—	120V AC Phase A 2	8	—	—	—	—	—
9	0.5	WH / BU	5986	I	—	Serial Data Communication Enable	9	—	—	—	—	—

X138 Body Wiring Harness to Chassis Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—
11	0.5	BK / WH	2751	I	—	Signal Ground	11	—	—	—	—	—
12	0.35	BK	6974	I	—	Rearview Camera Low Reference	12	0.5	BU	6974	II	—
13	0.35	GY / YE	6972	I	—	Rearview Camera Signal [+]	13	0.5	GY / YE	6972	II	—
14	0.75	RD / WH	2265	I	—	120V AC Phase B 2	14	—	—	—	—	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	1	WH / VT	1430	I	—	Exterior Courtesy Lamp Control	16	—	—	—	—	—
17	0.5	GN / GY	3569	I	—	Rear Closure Passive Entry Antenna Low Signal	17	—	—	—	—	—
18	0.35	BN	2257	I	—	Low Reference	18	—	—	—	—	—
19	0.5	BU / GN	1304	I	—	High Speed GMLAN Serial Data [+] 9	19	—	—	—	—	—
20	0.5	WH / GN	1305	I	—	High Speed GMLAN Serial Data [-] 9	20	—	—	—	—	—

X140 Body Wiring Harness to Chassis Wiring Harness



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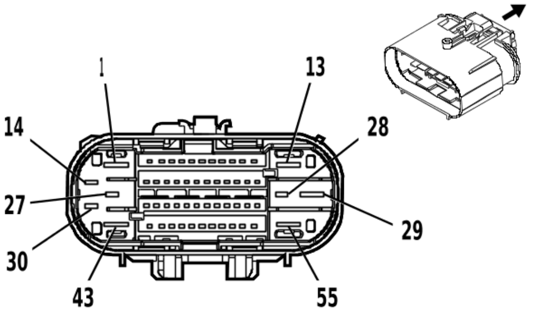


4993301

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35347516
Service Connector: 19371185
Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(BK)

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 35205190
Service Connector: 84727364
Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19332901	J-35616-35 (VT)	J-38125-212
II	19370818	J-35616-12 (BU)	J-38125-215A
III	19371217	J-35616-12 (BU)	J-38125-215A
IV	84634921	J-35616-42 (RD)	J-38125-212
V	Not required	No Tool Required	No Tool Required
VI	84847992	J-35616-32 (OG)	J-38125-36
VII	84867140	J-35616-13 (BU)	J-38125-215A
VIII	84867141	J-35616-13 (BU)	J-38125-215A
IX	84992391	J-35616-5 (PU)	J-38125-215A
X	Not required	No Tool Required	No Tool Required

X140 Body Wiring Harness to Chassis Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	GN / VT	1988	IV	—	Right Park Brake Motor Apply Control	1	4	GN / VT	1988	VI	—
2	— 1	BN / WH BN / GN	7462 19	V III	— —	Running Board Steps Disable Signal Right Rear Stop/Turn Signal Lamp Control	2	— 1	BN / WH BN / GN	7462 19	X VIII	— —
3	0.5	GY / YE	7128	II	—	Right Rear Wheel Speed Sensor Control	3	0.5	GY / YE	7128	VII	—

X140 Body Wiring Harness to Chassis Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
4	0.5	VT	882	II	—	Right Rear Wheel Speed Sensor Signal	4	0.5	VT	882	VII	—
5	0.35	GY / YE	1760	II	—	Left Side Object Detection LED Control	5	—	GY / YE	1760	X	—
6	0.5	GY / WH	7064	II	—	Left Front Wheel Speed Sensor Control	6	0.5	GY / WH	7064	VII	—
7	0.5	GY	830	II	—	Left Front Wheel Speed Sensor Signal	7	0.5	GY	830	VII	—
8	—	GY / GN	5996	V	—	Driver Outside Rearview Mirror Courtesy Lamp Control	8	—	GY / GN	5996	X	—
9	—	—	—	—	—	Not Occupied	9	—	—	—	—	—
10	0.5	GY / BK	7127	II	—	Left Rear Wheel Speed Sensor Control	10	0.5	GY / BK	7127	VII	—
11	0.5	BU	884	II	—	Left Rear Wheel Speed Sensor Signal	11	0.5	BU	884	VII	—
12	1	YE / BU	18	III	—	Left Rear Stop/Turn Signal Lamp Control	12	1	YE / BU	18	VIII	—
13	2.5	WH	2001	IV	—	Left Park Brake Motor Apply Control	13	4	WH	2001	VI	—
14	2	RD / VT	1242	I	—	Battery Positive Voltage	14	2.5	RD / VT	1242	IX	—
15	0.75	BN / BK	7726	II	—	Minor Endgate Motor Low Reference	15	—	BN / BK	7726	X	—
16	0.35	GY	7292	II	—	Major Endgate Release Switch Signal Exterior	16	—	GY	7292	X	—
17	0.75	VT	7725	II	—	Minor Endgate Motor Control	17	—	VT	7725	X	—
18	0.35	GN / YE	6846	II	—	Rear License Plate Lamp Control	18	0.5	GN / YE	6846	VII	—
19	—	—	—	—	—	Not Occupied	19	—	—	—	—	—
20	0.5	GN / YE	1616	II	—	Rear Brake Pad Wear Sensor Signal	20	0.5	GN / YE	1616	VII	—

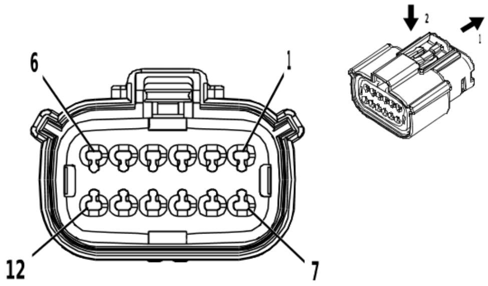
X140 Body Wiring Harness to Chassis Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
21	0.75	GN	1299	II	—	Major Endgate Motor Control	21	—	GN	1299	X	—
22	0.35	GN / VT	4114	II	—	Chassis Control Module LIN Bus 1	22	0.5	GN / VT	4114	VII	—
23	0.5	VT / GN	439	II	—	Run/Crank Ignition 1 Voltage	23	0.5	VT / GN	439	VII	—
24	0.35	YE	7294	II	—	Minor Endgate Release Switch Discrete Signal Exterior	24	—	YE	7294	X	—
25	0.5	BN / WH	2374	II	—	Object Sensor Voltage Reference	25	—	BN / WH	2374	X	—
26	0.5	YE / BU	2376	II	—	Left Rear Middle Parking Assist Sensor Signal	26	—	YE / BU	2376	X	—
27	—	—	—	—	—	Not Occupied	27	—	—	—	—	—
28	2.5	RD / GY	7040	I	—	Battery Positive Voltage	28	—	RD / GY	7040	X	—
29	— 2.5	GN / BK GY / BK	4369 4369	V IV	— —	Left Park Brake Motor Low Reference Left Park Brake Motor Low Reference	29	— 4	GN / BK GY / BK	4369 4369	X VI	— —
30	2	BU	47	I	—	Trailer Auxiliary Control	30	2.5	BU	47	IX	—
31	0.35	GY	1198	II	—	Endgate Release Switch Analog Signal Interior	31	—	GY	1198	X	—
32	0.75	YE / BK	7730	II	—	Major Endgate Motor Low Reference	32	—	YE / BK	7730	X	—
33	0.5	BN / BU	1602	II	—	Front Brake Pad Wear Sensor Signal	33	0.5	WH	1612	VII	—
34	0.5	GY / BU	7762	II	—	Cargo Lamp Control	34	—	GY / BU	7762	X	—
35	0.5	BU	2500	II	—	High Speed GMLAN Serial Data [+] 1	35	0.5	BU	2500	VII	—
36	0.5	WH	2501	II	—	High Speed GMLAN Serial Data [-] 1	36	0.5	WH	2501	VII	—
37	0.35	YE / BU	7295	II	—	Left Minor Endgate Ajar Signal	37	—	YE / BU	7295	X	—

X140 Body Wiring Harness to Chassis Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
38	—	GN / VT	4114	V	—	Chassis Control Module LIN Bus 1	38	—	GN / VT	4114	X	—
39	0.5	WH	6106	II	—	High Speed GMLAN Serial Data [-] 2	39	0.5	WH	6106	VII	—
40	0.35	YE / BK	5356	II	—	Left Tail Lamp Outage Detection Signal	40	0.5	YE / BK	5356	VII	—
41	0.5	BU / YE	6105	II	—	High Speed GMLAN Serial Data [+] 2	41	0.5	BU / YE	6105	VII	—
42	0.5	WH	6106	II	—	High Speed GMLAN Serial Data [-] 2	42	0.5	WH	6106	VII	—
43	2.5	GY	4368	IV	—	Right Park Brake Motor Low Reference	43	4	GY	4368	VI	—
44	—	—	—	—	—	Not Occupied	44	—	—	—	—	—
45	0.5	BK / GY	2379	II	—	Object Sensor Low Reference	45	—	BK / GY	2379	X	—
46	0.5	YE / WH	2377	II	—	Right Rear Middle Parking Assist Sensor Signal	46	—	YE / WH	2377	X	—
47	0.5	YE / VT	2378	II	—	Right Rear Outer Parking Assist Sensor Signal	47	—	YE / VT	2378	X	—
48	0.35	GY	1761	II	—	Right Side Object Detection LED Control	48	—	GY	1761	X	—
49	0.5	BN	7754	II	—	AC Power Outlet Enable Signal	49	—	BN	7754	X	—
50	0.35	VT / YE	5357	II	—	Right Tail Lamp Outage Detection Signal	50	—	VT / YE	5357	X	—
51	—	WH / BN	7296	V	—	Right Minor Endgate Ajar Signal	51	—	WH / BN	7296	X	—
52	0.5	YE	2375	II	—	Left Rear Outer Parking Assist Sensor Signal	52	—	YE	2375	X	—
53	0.5	BU / YE	6105	II	—	High Speed GMLAN Serial Data [+] 2	53	0.5	BU / YE	6105	VII	—
54 - 55	—	—	—	—	—	Not Occupied	54 - 55	—	—	—	—	—

X160 Engine Wiring Harness to Bank1 Fuel Rail Wiring Harness (L8T)



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2871860

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13653762
Service Connector: 19352907
Description: 12-Way F 1.5 MX Series, Sealed(BK)

Connector Part Information

Harness Type: Bank1 Fuel Rail Wiring Harness
OEM Connector: Not Available
Service Connector: 19352907
Description: 12-Way M (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19368973	J-35616-2A (GY)	J-38125-217
II	Not required	No Tool Required	No Tool Required

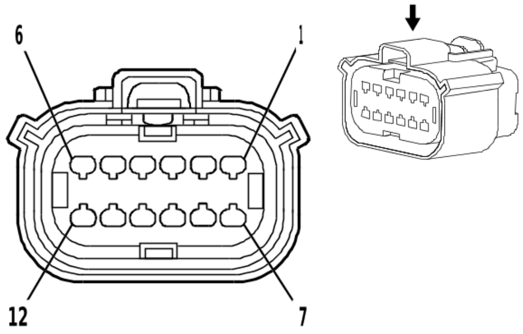
X160 Engine Wiring Harness to Bank1 Fuel Rail Wiring Harness (L8T)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BN / WH	4901	I	—	Direct Fuel Injector High Voltage Supply Cylinder 1	1	0.75	BN / WH	4901	II	—
2	0.75	GN / BK	4903	I	—	Direct Fuel Injector High Voltage Supply Cylinder 3	2	0.75	GN / BK	4903	II	—
3	0.75	GN / WH	4905	I	—	Direct Fuel Injector High Voltage Supply Cylinder 5	3	0.75	GN / WH	4905	II	—
4	0.75	WH / YE	4907	I	—	Direct Fuel Injector High Voltage Supply Cylinder 7	4	0.75	WH / YE	4907	II	—
5	0.75	BN	4801	I	—	Direct Fuel Injector High Voltage Control Cylinder 1	5	0.75	BN	4801	II	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—

X160 Engine Wiring Harness to Bank1 Fuel Rail Wiring Harness (L8T) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
7	0.75	GN	4803	I	—	Direct Fuel Injector High Voltage Control Cylinder 3	7	0.75	GN	4803	II	—
8	0.75	WH / GN	4805	I	—	Direct Fuel Injector High Voltage Control Cylinder 5	8	0.75	WH / GN	4805	II	—
9	0.75	YE / GY	4807	I	—	Direct Fuel Injector High Voltage Control Cylinder 7	9	0.75	YE / GY	4807	II	—
10	0.5	WH / RD	480	I	—	Engine Control Vehicle Sensors 5 Volt Reference 1	10	0.5	WH / RD	480	II	—
11	0.5	BU / WH	2918	I	—	Fuel Rail Pressure Sensor Signal	11	0.5	BU / WH	2918	II	—
12	0.5	BK / YE	548	I	—	Engine Control Sensors Low Reference 1	12	0.5	BK / YE	548	II	—

X161 Engine Wiring Harness to Fuel Injector Wiring Harness - Even (L8T)



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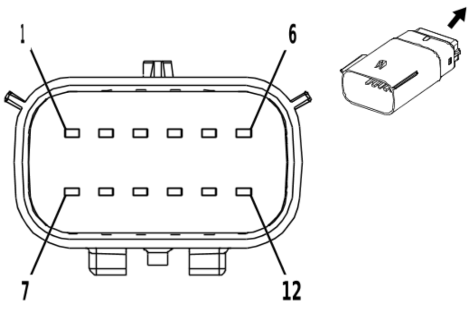

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Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13922706
Service Connector: 19352907
Description: 12-Way F 1.5 MX Series, Sealed(BK)

Connector Part Information

Harness Type: Fuel Injector Wiring Harness - Even
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way M (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19368973	J-35616-2A (GY)	J-38125-217
II	Not required	No Tool Required	No Tool Required

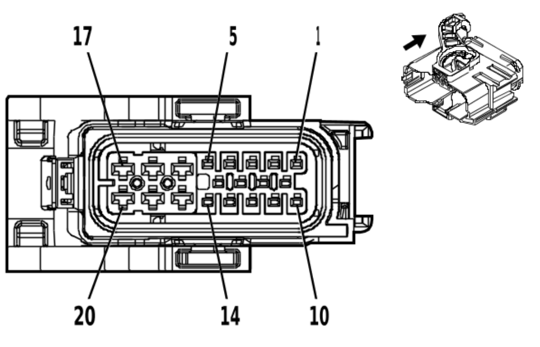
X161 Engine Wiring Harness to Fuel Injector Wiring Harness - Even (L8T)

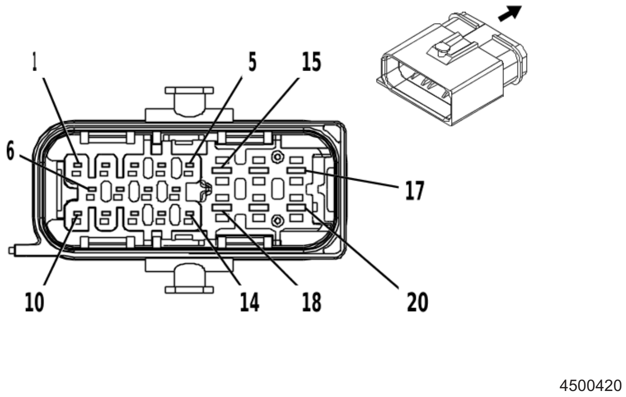
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BN / GN	4902	I	—	Direct Fuel Injector High Voltage Supply Cylinder 2	1	0.75	BN / GN	4902	II	—
2	0.75	BU / WH	4904	I	—	Direct Fuel Injector High Voltage Supply Cylinder 4	2	0.75	BU / WH	4904	II	—
3	0.75	VT	4906	I	—	Direct Fuel Injector High Voltage Supply Cylinder 6	3	0.75	VT	4906	II	—
4	0.75	WH / GN	4908	I	—	Direct Fuel Injector High Voltage Supply Cylinder 8	4	0.75	WH / GN	4908	II	—
5	0.75	BU	4802	I	—	Direct Fuel Injector High Voltage Control Cylinder 2	5	0.75	BU	4802	II	—
6 - 7	—	—	—	—	—	Not Occupied	6 - 7	—	—	—	—	—

X161 Engine Wiring Harness to Fuel Injector Wiring Harness - Even (L8T) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
8	0.75	GY / BU	4804	I	—	Direct Fuel Injector High Voltage Control Cylinder 4	8	0.75	GY / BU	4804	II	—
9	0.75	GN / VT	4806	I	—	Direct Fuel Injector High Voltage Control Cylinder 6	9	0.75	GN / VT	4806	II	—
10	0.75	GY	4808	I	—	Direct Fuel Injector High Voltage Control Cylinder 8	10	0.75	GY	4808	II	—
11	0.75	VT / BK	7300	I	—	High Pressure Fuel Pump Low Control	11	0.75	VT / BK	7300	II	—
12	0.75	YE	7301	I	—	High Pressure Fuel Pump High Control	12	0.75	YE	7301	II	—

X171 Chassis Wiring Harness to Engine Wiring Harness





Connector Part Information

Harness Type: Chassis Wiring Harness

OEM Connector: 13974124

Service Connector: 19371189

Description: 20-Way F 1.2 MCON, 2.8 MCP Series, Sealed(BK)

Connector Part Information

Harness Type: Engine Wiring Harness

OEM Connector: 33156041

Service Connector: 19333031

Description: 20-Way M 1.2, 2.8 MCP Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19300446	J-35616-12 (BU)	J-38125-12A
II	19368624	J-35616-35 (VT)	J-38125-212
III	13575364	J-35616-5 (PU)	J-38125-36
IV	19356519	J-35616-13 (BU)	J-38125-215A

X171 Chassis Wiring Harness to Engine Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT / YE	5985	I	—	Accessory Wake-Up Serial Data	1	0.5	VT / YE	5985	IV	—
2	0.5	WH	4499	I	—	High Speed GMLAN Serial Data [-] 7	2	0.5	WH	4499	IV	—
3	0.5	BU / BN	4498	I	—	High Speed GMLAN Serial Data [+] 7	3	0.5	BU / BN	4498	IV	—
4	0.5	BK / GN	3657	I	—	Exhaust Gas Temperature Sensor 3 Low Reference	4	0.5	BK / GN	3657	IV	—
5	0.5	GY / WH	5378	I	—	Exhaust Gas Temperature Sensor 3 Signal	5	0.5	GY / GN	5378	IV	—
6	0.5	BK / GY	3659	I	—	Exhaust Gas Temperature Sensor 4 Low Reference	6	0.5	BK / GY	3659	IV	—

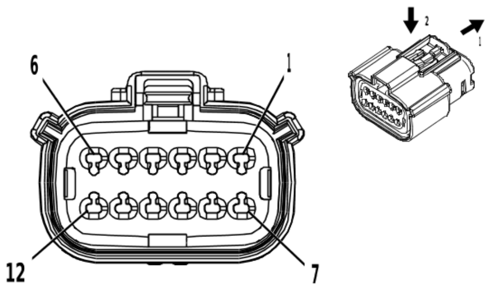
X171 Chassis Wiring Harness to Engine Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
7	0.5 0.75 0.5	VT / GN VT / GN GN / BU	4320 4320 3889	I I I	- FHS L5P L8T- N2N	Powertrain Sensor Bus Enable Powertrain Sensor Bus Enable Powertrain Sensor Bus Relay Control	7	0.75 0.5	VT / GN VT / GN	4320 4320	IV IV	L5P - FHS
8	0.5 0.5	VT / WH YE / BU	3658 1465	I I	L5P L8T	Exhaust Gas Temperature Sensor 4 Signal Secondary Fuel Pump Relay Control	8	0.5 0.5	VT / BN YE / BU	3658 1465	IV IV	L5P L8T
9	0.5	VT / BN	2927	I	—	Exhaust Aftertreatment Fuel Injector Low Control	9	0.5	VT / BN	2927	IV	—
10	0.5	BN / BU	2926	I	—	Exhaust Aftertreatment Fuel Injector High Control	10	0.5	BN / BU	2926	IV	—
11	0.75	YE / BU	1465	I	—	Secondary Fuel Pump Relay Control	11	0.5	YE / BU	1465	IV	—
12	0.5	BK / VT	3661	I	—	Exhaust Gas Temperature Sensor 5 Low Reference	12	0.5	BK / VT	3661	IV	—
13	0.5	BU / GY	3660	I	—	Exhaust Gas Temperature Sensor 5 Signal	13	0.5	BU / GY	3660	IV	—
14	0.5	GN / GY	465	I	—	Fuel Pump Primary Relay Control	14	0.5	GN / GY	465	IV	—
15	1.5	VT / BU	3674	II	—	NOx Sensor 1 Control	15	1.5	VT / BU	3674	III	—
16	1	WH / RD	6054	II	—	Exhaust Pressure Sensor 1 5V Reference	16	0.5	WH / RD	6054	III	—
17	2.5	VT / GN	355	II	—	Fuel Filter Heater Control Circuit	17	2.5	VT / GN	355	III	—
18	2.5	BU	3921	II	—	Diesel Exhaust Fluid Heater Control 1	18	2.5	BU	3921	III	—
19	1	BK / YE	6055	II	—	Exhaust Pressure Sensor 1 Low Reference	19	0.5	BK / YE	6055	III	—

X171 Chassis Wiring Harness to Engine Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
20	1	BU	6053	II	—	Exhaust Pressure Sensor 1 Signal	20	0.5	BU	6053	III	—

X172 Engine Wiring Harness to Engine Jumper Wiring Harness (L5P)



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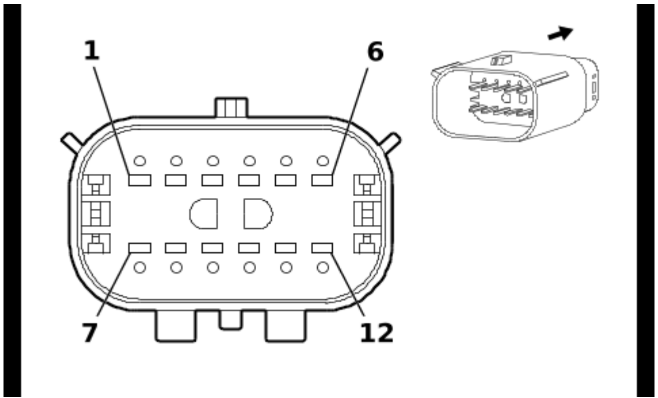


1825167

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 13503526
Service Connector: 19352907
Description: 12-Way F 1.5 MX Series, Sealed(BK)

Connector Part Information

Harness Type: Engine Jumper Wiring Harness
OEM Connector: 13520579
Service Connector: Service by Harness - See Part Catalog
Description: 12-Way M 1.5 MX Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19368973	J-35616-2A (GY)	J-38125-217
II	Not required	J-35616-3 (GY)	No Tool Required

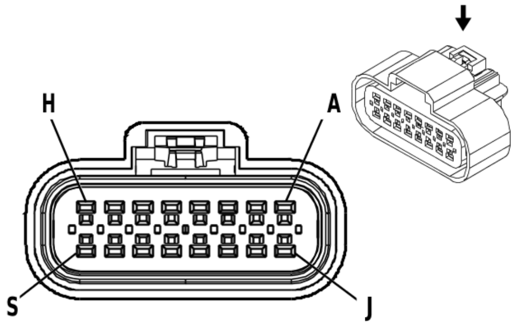
X172 Engine Wiring Harness to Engine Jumper Wiring Harness (L5P)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	WH / RD	2705	I	L5P	Oil Pressure Sensor 5V Reference	1	0.5	WH / RD	2705	II	L5P
2	0.5	BK / VT	2755	I	L5P	Oil Pressure Sensor Low Reference	2	0.5	BK / VT	2755	II	L5P
3	0.5	YE / BN	331	I	L5P	Oil Pressure Sensor Signal	3	0.5	YE / BN	331	II	L5P
4	0.5	BU	410	I	L5P	Engine Coolant Temperature Sensor Signal	4	0.5	BU	410	II	L5P
5	0.5	BK / BN	2761	I	L5P	Coolant Temperature Sensor Low Reference	5	0.5	BK / BN	2761	II	L5P
6	0.5	BK / WH	151	I	L5P	Signal Ground	6	0.5	BK / WH	151	II	L5P
7	0.5	BN / GN	1174	I	L5P	Oil Level Switch Signal	7	0.5	BN / GN	1174	II	L5P
8 - 9	—	—	—	—	—	Not Occupied	8 - 9	—	—	—	—	—
10	0.5	YE	2928	I	L5P	Fuel Metering Solenoid Valve High Control	10	0.5	YE	2928	II	L5P

X172 Engine Wiring Harness to Engine Jumper Wiring Harness (L5P) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
11	0.5	BN / BK	2929	I	L5P	Fuel Metering Solenoid Valve Low Control	11	0.5	BN / BK	2929	II	L5P
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—

X176 Engine Wiring Harness to Power Take-Off Control Module Jumper Wiring Harness (PTO)



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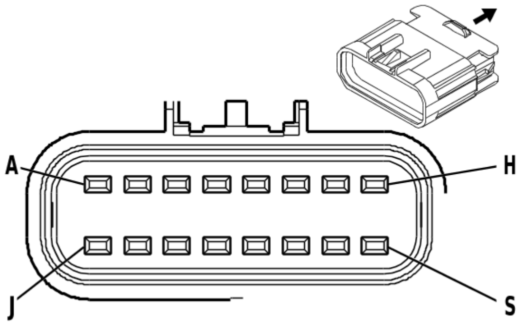

632345

Connector Part Information

Harness Type: Engine Wiring Harness

OEM Connector: 15326863

Service Connector: 19180282

Description: 16-Way F 150 GT Series, Sealed(BK)

Connector Part Information

Harness Type: Power Take-Off Control Module Jumper Wiring Harness

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 16-Way M (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19368215	J-35616-14 (GN)	J-38125-553
II	Not required	No Tool Required	No Tool Required

X176 Engine Wiring Harness to Power Take-Off Control Module Jumper Wiring Harness (PTO)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.75	GY / GN	6239	I	—	Transmission Power Take-Off Engage/ Disengage Signal Power	A	0.75	GY / GN	6239	II	—
B - C	—	—	—	—	—	Not Occupied	B - C	—	—	—	—	—
D	1.5	BK	4450	I	—	Ground	D	1.5	BK	4450	II	—
E - F	—	—	—	—	—	Not Occupied	E - F	—	—	—	—	—
G	0.5	WH / BK	8238	I	—	Power Take Off Upfitter Interlock Switch Signal 2	G	0.5	WH / BK	8238	II	—
H	—	—	—	—	—	Not Occupied	H	—	—	—	—	—
J	0.5	WH / GN	6142	I	—	Power Take-Off Engine Shutdown Signal	J	0.5	WH / GN	6142	II	—
K	0.75	RD / VT	2640	I	—	Battery Positive Voltage	K	0.75	RD / VT	2640	II	—

X176 Engine Wiring Harness to Power Take-Off Control Module Jumper Wiring Harness (PTO) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
L - M	—	—	—	—	—	Not Occupied	L - M	—	—	—	—	—
N	0.5	VT / GN	4308	I	—	Power Take-Off Remote Throttle Signal	N	0.5	VT / GN	4308	II	—
P	—	—	—	—	—	Not Occupied	P	—	—	—	—	—
R	0.5	VT / WH	239	I	—	Run/Crank Ignition 1 Voltage	R	0.5	VT / WH	239	II	—
S	—	—	—	—	—	Not Occupied	S	—	—	—	—	—

X177 Transmission Wiring Harness to Transmission Wiring Harness (MGM/MGU)

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Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 22-Way F

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Connector Part Information

Harness Type: Transmission Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 22-Way M

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
I	Not required	No Tool Required	No Tool Required
II	Not required	No Tool Required	No Tool Required
II	Not required	No Tool Required	No Tool Required

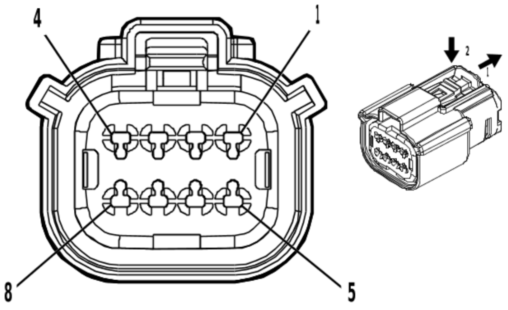
X177 Transmission Wiring Harness to Transmission Wiring Harness (MGM/MGU)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT	7819	I	—	Default Disable Solenoid Control	1	0.5	VT	7819	II	—
2	0.5	GN / OG	1530	I	—	Transmission Line Pressure Control Solenoid Valve Control	2	0.5	GN / OG	1530	II	—
3	0.5	GY / BN	422	I	—	Torque Converter Clutch Solenoid Valve Control	3	0.5	GY / BN	422	II	—
4	0.5	BN	6387	I	—	Transmission High Side Driver 1 Control	4	0.5	BN	6387	II	—
13	— 0.5	BK / BN BU / BN	586 586	I I	— —	Transmission Fluid Temperature Sensor Low Reference Transmission Fluid Temperature Sensor Low Reference	13	— 0.5	BK / BN BU / BN	586 586	II II	— —
14	0.5	BN / YE	585	I	—	Transmission Fluid Temperature Sensor Signal	14	0.5	BN / YE	585	II	—
15	—	BU / GN	6404	I	—	Clutch Solenoid Valve E Control	15	—	BU / GN	6404	II	—
16	0.5	GN / BN	6403	I	—	Clutch Solenoid Valve D Control	16	0.5	GN / BN	6403	II	—
17	0.5	GY	6402	I	—	Clutch Solenoid Valve C Control	17	0.5	GY	6402	II	—

X177 Transmission Wiring Harness to Transmission Wiring Harness (MGM/MGU) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
18	0.5	WH	6388	I	—	Transmission High Side Driver 2 Control	18	0.5	WH	6388	II	—
20	0.5	BN / WH	4509	I	—	Transmission Clutch F Control	20	0.5	BN / WH	4509	II	—
21	0.5	YE / VT	4507	I	—	Transmission Clutch H Control	21	0.5	YE / VT	4507	II	—
22	0.5	BU / GY	4508	I	—	Transmission Clutch G Control	22	0.5	BU / GY	4508	II	—

X180 Engine Wiring Harness to Engine Jumper Wiring Harness (L8T)



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4846407

Connector Part Information

Harness Type: Engine Wiring Harness
OEM Connector: 35063116
Service Connector: 84928314
Description: 8-Way F 1.5 MX Series, Sealed(BK)

Connector Part Information

Harness Type: Engine Jumper Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required
II	Not required	No Tool Required	No Tool Required

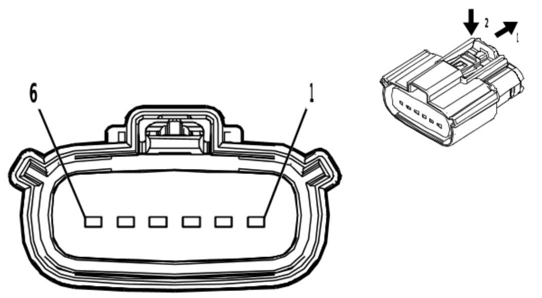
X180 Engine Wiring Harness to Engine Jumper Wiring Harness (L8T)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GY / BU	5300	I	—	Intake Camshaft Position Sensor 1 Voltage Reference	1	0.5	GY / BU	5300	II	—
2	0.5	BK / GN	5301	I	—	Intake Camshaft Position Sensor Low Reference 1	2	0.5	BK / GN	5301	II	—
3	0.5	YE / VT	5275	I	—	Intake Camshaft Position Sensor 1	3	0.5	YE / VT	5275	II	—
4	0.5	BU	179	I	—	Engine Oil Pump Control	4	0.5	BU	179	II	—
5	0.5	VT / BN	5284	I	—	Intake Camshaft Position Actuator Solenoid Valve 1	5	0.5	VT / BN	5284	II	—
6	0.5	BK / BN	6753	I	—	Camshaft Position Actuator Solenoid Valve W Low Reference	6	0.5	BK / BN	6753	II	—

X180 Engine Wiring Harness to Engine Jumper Wiring Harness (L8T) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
7	0.5	VT / BU	5293	I	—	Powertrain Main Relay Fused Supply Voltage 4	7	0.5	VT / BU	5293	II	—
8	—	—	—	—	—	Not Occupied	8	—	—	—	—	—

X181 Engine Wiring Harness to Engine Oil Pressure Sensor Jumper Wiring Harness (L8T)



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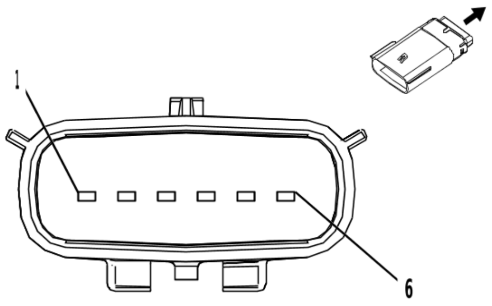

3277908

Connector Part Information

Harness Type: Engine Wiring Harness

OEM Connector: 35432115

Service Connector: 86801953

Description: 6-Way F 1.5 Series, Sealed(BK)

Connector Part Information

Harness Type: Engine Oil Pressure Sensor Jumper Wiring Harness

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way M (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	No Tool Required	No Tool Required

X181 Engine Wiring Harness to Engine Oil Pressure Sensor Jumper Wiring Harness (L8T)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BU	410	I	—	Engine Coolant Temperature Sensor Signal	1	0.5	BU	410	II	—
2	0.5	BK / YE	548	I	—	Engine Control Sensors Low Reference 1	2	0.5	BK / YE	548	II	—
3	0.5	YE / BN	331	I	—	Oil Pressure Sensor Signal	3	0.5	YE / BN	331	II	—
4	0.5	BK / YE	548	I	—	Engine Control Sensors Low Reference 1	4	0.5	BK / YE	548	II	—
5	0.5	WH / RD	480	I	—	Engine Control Vehicle Sensors 5 Volt Reference 1	5	0.5	WH / RD	480	II	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—

X183 Engine Oil Pressure Jumper Wiring Harness to Engine Oil Pressure Control Solenoid Jumper Wiring Harness (L8T)

—

Connector Part Information

Harness Type: Engine Oil Pressure Jumper Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F

—

Connector Part Information

Harness Type: Engine Oil Pressure Control Solenoid Jumper Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
II	Not required	No Tool Required	No Tool Required

X183 Engine Oil Pressure Jumper Wiring Harness to Engine Oil Pressure Control Solenoid Jumper Wiring Harness (L8T)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	VT / BU	5293	I	—	Powertrain Main Relay Fused Supply Voltage 4	1	—	VT / BU	5293	II	—
2	—	BU	179	I	—	Engine Oil Pump Control	2	—	BU	179	II	—

X192 Snow Plow Wiring Harness to Accessory Wiring Harness (VYU)

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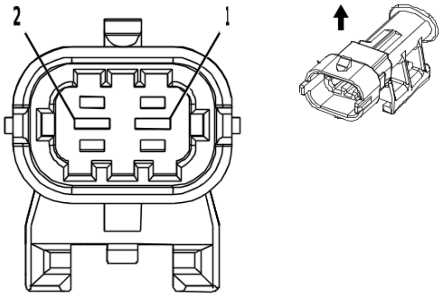


2667643

Connector Part Information

Harness Type: Snow Plow Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F

Connector Part Information

Harness Type: Accessory Wiring Harness
OEM Connector: 10864494
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 2.8 Timer Series, Sealed(BK)

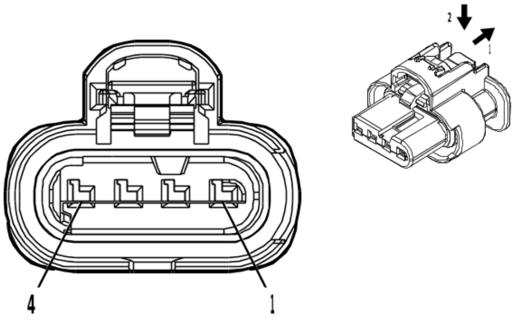
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
II	Not required	No Tool Required	No Tool Required

X192 Snow Plow Wiring Harness to Accessory Wiring Harness (VYU)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	BN	25	I	—	Charge Indicator Control	1	—	BN	25	II	—
2	—	—	—	I	—	—	2	—	GY	23	II	—

X205 Instrument Panel Wiring Harness to Instrument Panel Air Bag Jumper Wiring Harness



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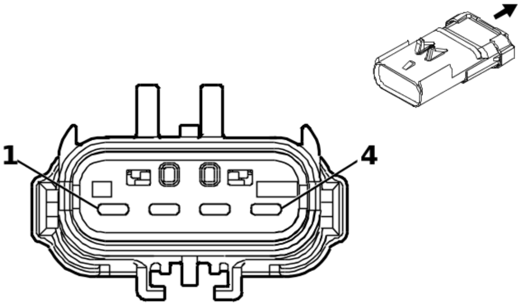


5254700

Connector Part Information

Harness Type: Instrument Panel Wiring Harness

OEM Connector: 35053710

Service Connector: 19371193

Description: 4-Way F 1.2 MCON-CB Series, Sealed(YE)

Connector Part Information

Harness Type: Instrument Panel Air Bag Jumper Wiring Harness

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M (YE)

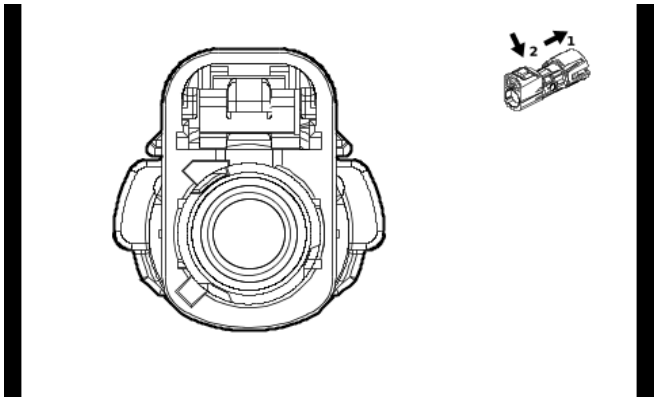
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	No Tool Required	No Tool Required

X205 Instrument Panel Wiring Harness to Instrument Panel Air Bag Jumper Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	YE / OG	3025	I	—	Passenger Instrument Panel Air Bag Stage 1 High Control	1	0.35	YE / OG	3025	II	—
2	0.35	OG / WH	3024	I	—	Passenger Instrument Panel Air Bag Stage 1 Low Control	2	0.35	OG / WH	3024	II	—
3	0.35	GY / OG	3027	I	—	Passenger Instrument Panel Air Bag Stage 2 High Control	3	0.35	GY / OG	3027	II	—
4	0.35	OG / VT	3026	I	—	Passenger Instrument Panel Air Bag Stage 2 Low Control	4	0.35	OG / VT	3026	II	—

X208 Body Wiring Harness to Chassis Wiring Harness (UVI/UVS)



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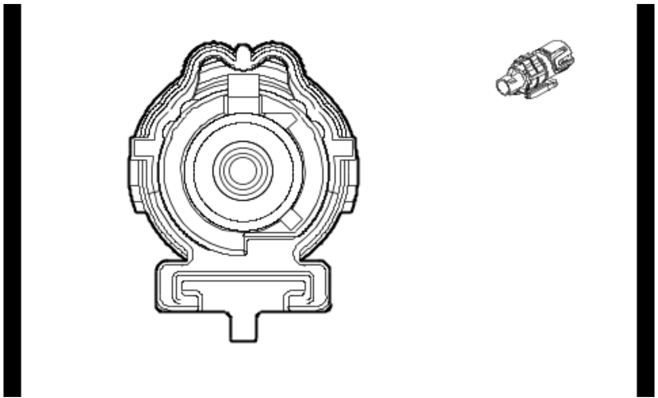


5758017

Connector Part Information

Harness Type: Body Wiring Harness COAX
OEM Connector: 35187037
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Coax Type(BN)

Connector Part Information

Harness Type: Chassis Wiring Harness COAX
OEM Connector: 33338245
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way M Coax Type, Sealed(BN)

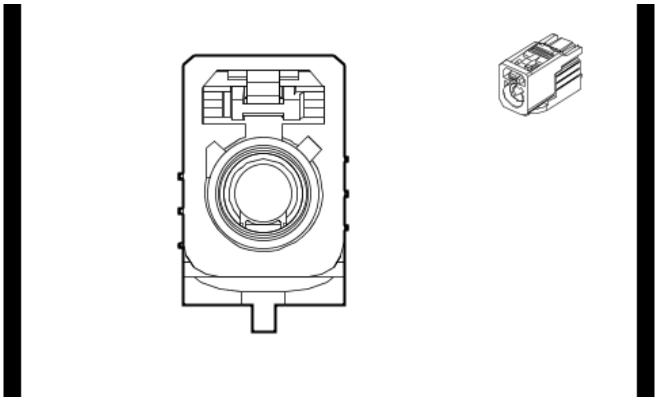
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X208 Body Wiring Harness to Chassis Wiring Harness (UVI/UVS)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	Coax Cable	—	I	—	Rear Vision Camera Coaxial Video Signal	—	—	Coax Cable	—	I	—

X209 Body Wiring Harness to Instrument Panel Wiring Harness



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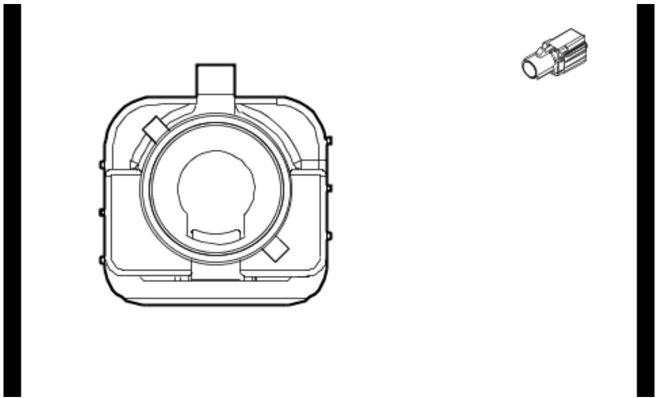


5873701

Connector Part Information

Harness Type: Body Wiring Harness COAX
OEM Connector: 33351013
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Coax Type(BU)

Connector Part Information

Harness Type: Instrument Panel Wiring Harness COAX
OEM Connector: 33351038
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way M Coax Type(BU)

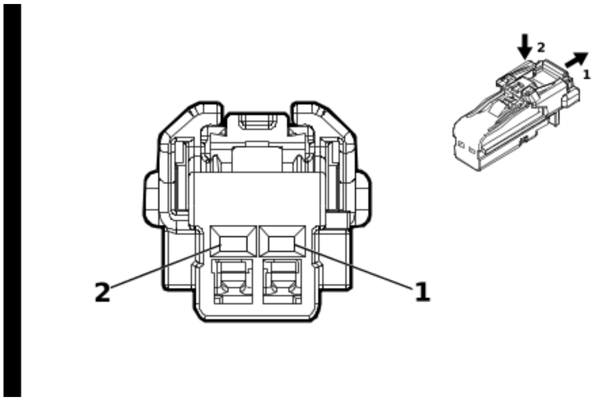
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X209 Body Wiring Harness to Instrument Panel Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	Coax Cable	—	I	—	Video Processing Module Coaxial Video Signal	—	—	Coax Cable	—	I	—

X211 Instrument Panel Wiring Harness to Body Wiring Harness (UQA)



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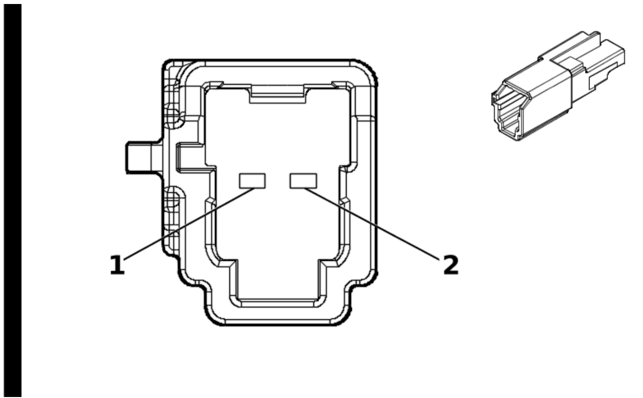


5355341

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35311666
Service Connector: 87816612
Description: 2-Way F 1.2 MCON Series(BK)

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35258943
Service Connector: 84815531
Description: 2-Way M 1.2 MCON Series(BK)

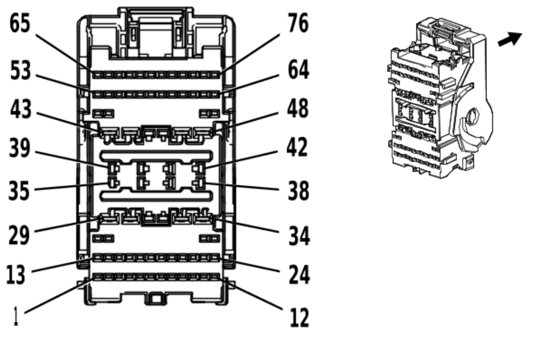
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required
II	Not required	J-35616-13 (BU)	No Tool Required

X211 Instrument Panel Wiring Harness to Body Wiring Harness (UQA)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	BN / BK	7214	I	—	Ethernet Bus 6 [-]	1	0.35	BN / BK	7214	II	—
2	0.35	GY / BK	7215	I	—	Ethernet Bus 6 [+]	2	0.35	GY / BK	7215	II	—

X225 Instrument Panel Wiring Harness to Body Wiring Harness



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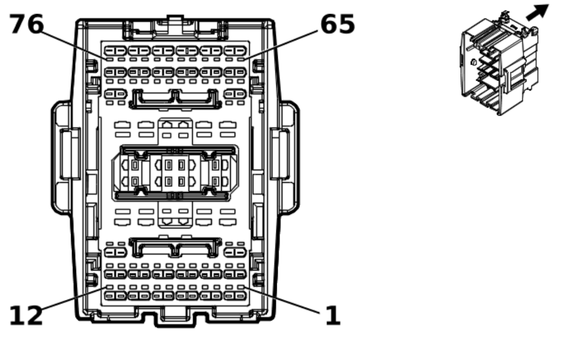


5277492

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35142991
Service Connector: 13526160
Description: 76-Way F 1.2, 1.5, 2.8 YESC Series(BK)

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35273135
Service Connector: 13526160
Description: 76-Way M 1.2 MCON-CB, 1.5, 2.8 YESC Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575708	J-35616-2A (GY)	J-38125-11A
II	13587516	J-35616-4A (PU)	J-38125-11A
III	84962854	J-35616-12 (BU)	J-38125-215A
IV	Not required	No Tool Required	No Tool Required
V	84616651	J-35616-13 (BU)	J-38125-215A
VI	84888592	J-35616-5 (PU)	J-38125-11A
VII	85119177	J-35616-3 (GY)	J-38125-553
VIII	Not required	No Tool Required	No Tool Required

X225 Instrument Panel Wiring Harness to Body Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GN / YE	2081	III	—	Exhaust Brake Switch Signal	1	0.5	GN / YE	2081	V	—
2	0.35	GN / WH	3438	III	—	Exhaust Brake Switch Indicator Control	2	0.35	GN / WH	3438	V	—
3	0.35	BU / YE	5361	III	—	Brake Apply Sensor Signal	3	0.35	BU / YE	5361	V	—
4	0.35	BK / BN	5360	III	—	Brake Apply Sensor Low Reference	4	0.35	BK / BN	5360	V	—
5	0.35	WH	5359	III	—	Brake Apply Sensor Control	5	0.35	WH	5359	V	—

X225 Instrument Panel Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
6	0.35	BK / GY	2204	III	—	Enhanced Driver Mode 1 Switch Low Reference	6	0.35	BK / GY	2204	V	—
7	0.35	GY	4109	III	—	Driver Mode Switch 5V Reference	7	0.35	GY	4109	V	—
8	— 0.35	WH / BN WH / BN	4108 2203	IV III	— —	Driver Mode Switch Signal Enhanced Driver Mode 2 Switch Signal	8	— 0.35	WH / BN WH / BN	4108 2203	VIII V	— —
9	0.35	YE	6817	III	—	LED Backlight Dimming Control 1	9	0.35	YE	6817	V	—
10	0.35	GN	5060	III	—	Low Speed GMLAN Serial Data	10	0.35	GN	5060	V	—
11	0.35	VT / GY	1630	III	—	Steering Column Key Cylinder Lock Solenoid Actuator Control	11	0.35	VT / GY	1630	V	—
12	0.35	VT / BK	3	III	—	Run/Crank Ignition 1 Voltage	12	0.35	VT / BK	3	V	—
13	0.35	GN / BK	3558	III	—	Passive Start Switch Signal 2	13	0.35	GN / BK	3558	V	—
14	0.35	VT / YE	4	III	—	Accessory Ignition Voltage	14	0.35	VT / YE	4	V	—
15	0.35	OG / VT	3021	III	—	Steering Wheel Air Bag Stage 1 High Control	15	0.35	OG / VT	3021	V	—
16	0.35	BN / OG	3020	III	—	Steering Wheel Air Bag Stage 1 Low Control	16	0.35	BN / OG	3020	V	—
17	0.35	OG / GN	3023	III	—	Steering Wheel Air Bag Stage 2 High Control	17	0.35	OG / GN	3023	V	—
18	0.35	WH / OG	3022	III	—	Steering Wheel Air Bag Stage 2 Low Control	18	0.35	WH / OG	3022	V	—
19	0.35	GN / VT	4114	III	—	Chassis Control Module LIN Bus 1	19	0.35	GN / VT	4114	V	—
20	0.35	YE / WH	1690	III	—	Mirror Dimming Signal	20	0.35	YE / WH	1690	V	—
21	0.35	BK / YE	1691	III	—	Automatic Day/Night Mirror Low Reference	21	0.35	BK / YE	1691	V	—

X225 Instrument Panel Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
22	0.35	GN	4512	III	—	Wireless Charging System Charge Indicator Control	22	0.35	GN	4512	V	—
23	0.35	GN / WH	4115	III	—	Body Control Module LIN Bus 5	23	0.35	GN / WH	4115	V	—
24	0.35	BU / BK	6105	III	—	High Speed GMLAN Serial Data [+] 2	24	0.5	BU / YE	6105	V	—
25	0.35	GY	6106	III	—	High Speed GMLAN Serial Data [-] 2	25	0.5	WH	6106	V	—
26	0.35	BN / WH	419	III	—	Check Engine Indicator Control	26	0.35	BN / WH	419	V	—
27	0.35	GN / GY	3277	III	—	Vehicle Anti-Theft System Immobilizer Low Reference	27	0.35	GN / GY	3277	V	—
28	0.35	WH / BU	5986	III	—	Serial Data Communication Enable	28	0.35	WH / BU	5986	V	—
29	—	—	—	—	—	Not Occupied	29	—	—	—	—	—
30	0.35	YE / WH	816	II	—	Brake Transmission Shift Interlock Solenoid Actuator Control	30	0.35	YE / WH	816	VI	—
31	0.35	WH	2501	I	—	High Speed GMLAN Serial Data [-] 1	31	0.5	WH	2501	VII	—
32	0.35	BU	2500	I	—	High Speed GMLAN Serial Data [+] 1	32	0.5	BU	2500	VII	—
33	0.75	BU / VT	1857	II	—	Left Front Midrange Speaker [+] Control	33	0.75	BU / VT	1857	VI	—
34	0.75	BU / BN	1957	II	—	Left Front Midrange Speaker [-] Control	34	0.75	BU / BN	1957	VI	—
35	0.5	WH / BN	6815	I	—	Inadvertent Load Control	35	0.5	WH / BN	6815	VII	—
36	0.35	GN / WH	1932	I	—	Shift Select Switch Park Signal	36	0.35	GN / WH	1932	VII	—
37	0.35	GN / WH	488	I	—	Power Take-Off Control Switch Signal	37	1	GN / WH	488	VII	—
38	0.35	BN / GN	4311	I	—	Power Take-Off Enable Cabin Switch Normally Closed Signal	38	0.35	BN / GN	4311	VII	—

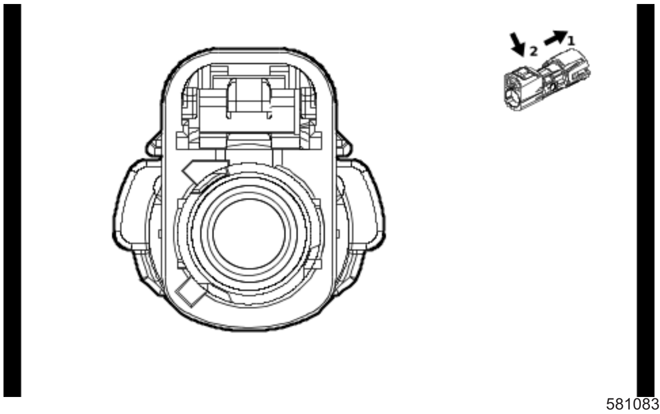
X225 Instrument Panel Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
39	0.35	BU / GY	553	I	—	Shift Select Switch Performance Signal	39	0.35	BU / GY	553	VII	—
40	0.35	GN / BN	2087	I	—	Multi-axis Acceleration Sensor Supply Voltage	40	0.35	GN / BN	2087	VII	—
41	—	—	—	—	—	Not Occupied	41	—	—	—	—	—
42	— 0.35	BU / YE BU / YE	7176 6844	IV I	— —	All Windows Open Switch Signal ABS/Traction Control Hill Descent Control Switch Signal	42	— 0.35	BU / YE BU / YE	7176 6844	VIII VII	— —
43	—	—	—	—	—	Not Occupied	43	—	—	—	—	—
44	0.35	Bare	514	II	—	Low Reference	44	0.35	Bare	514	VI	—
45	0.75	BK	5683	I	—	120V AC Phase A	45	0.75	BK	5683	VII	—
46	0.75	RD	5684	I	—	120V AC Phase B	46	0.75	RD	5684	VII	—
47	0.75	BN / BU	118	II	—	Left Front Speaker [-] Control 1	47	0.75	BN / BU	118	VI	—
48	0.75	BU	201	II	—	Left Front Speaker 1 [+] Control	48	0.75	BU	201	VI	—
49	0.35	BU / BN	7573	III	—	A/C Compressor Solenoid Valve Control	49	0.35	BU / BN	7573	V	—
50	0.35	BU / YE	7574	III	—	A/C Compressor Solenoid Valve Control	50	0.35	BU / YE	7574	V	—
51	0.5	GN	199	III	—	Left Rear Speaker [+] Control	51	0.5	GN	199	V	—
52	0.5	GN / BK	116	III	—	Left Rear Speaker [-] Control	52	0.5	GN / BK	116	V	—
53	0.35	GN / BN	507	III	—	Wait To Start Indicator Control	53	0.35	GN / BN	507	V	—
54	0.35	WH / BN	7296	III	—	Right Minor Endgate Ajar Signal	54	0.35	WH / BN	7296	V	—
55	0.35	YE / BU	7295	III	—	Left Minor Endgate Ajar Signal	55	0.35	YE / BU	7295	V	—
56	0.35	GN / VT	7533	III	—	Immobilizer LIN Bus 1	56	0.35	GN / VT	7533	V	—

X225 Instrument Panel Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
57 - 58	—	—	—	—	—	Not Occupied	57 - 58	—	—	—	—	—
59	0.35	BN	7754	III	—	AC Power Outlet Enable Signal AC Power Outlet Enable Signal	59	0.5 0.35	BN BN	7754 7754	V V	KC9/ KCA KI4/ KI5
60	0.35	GN / VT	1601	III	—	Steering Column Lock Signal	60	0.35	GN / VT	1601	V	—
61	0.35	BK / GY	3559	III	—	Passive Start Switch 2 Low Reference	61	0.35	BK / GY	3559	V	—
62	—	—	—	—	—	Not Occupied	62	—	—	—	—	—
63	0.35	BU / YE	6105	III	—	High Speed GMLAN Serial Data [+] 2	63	0.5	BU / YE	6105	V	—
64	0.35	WH	6106	III	—	High Speed GMLAN Serial Data [-] 2	64	0.5	WH	6106	V	—
65	—	—	—	—	—	Not Occupied	65	—	—	—	—	—
66	0.5	BN / BK	3552	III	—	Interior Passive Entry Antenna 1 High Signal	66	0.35	BN / BK	3552	V	—
67	0.5	WH	3553	III	—	Interior Passive Entry Antenna 1 Low Signal	67	0.35	WH	3553	V	—
68	0.35	YE / VT	6191	III	—	Power Rear Window Switch Open Signal	68	0.35	YE / VT	6191	V	—
69	0.35	WH	6192	III	—	Sliding Rear Window Switch Close Signal	69	0.35	WH	6192	V	—
70	0.35	GY / BK	3276	III	—	Immobilizer Control Module Control	70	0.35	GY / BK	3276	V	—
71	—	—	—	—	—	Not Occupied	71	—	—	—	—	—
72	0.35	BN	1560	III	—	Neutral Indicator Control	72	0.35	BN	1560	V	—
73	0.5	BU / YE	68	III	—	Low Coolant Level Indicator Control	73	0.5	BU / YE	68	V	—
74	0.35	BU / BN	6807	III	—	DC/AC Inverter Control	74	0.35	BU / BN	6807	V	—
75	0.35	VT	185	III	—	Low Washer Fluid Indicator Control	75	0.35	VT	185	V	—
76	0.35	BN / WH	7462	III	—	Running Board Steps Disable Signal	76	0.35	BN / WH	7462	V	—

X228 Body Wiring Harness to Chassis Wiring Harness (UVI/UVS)



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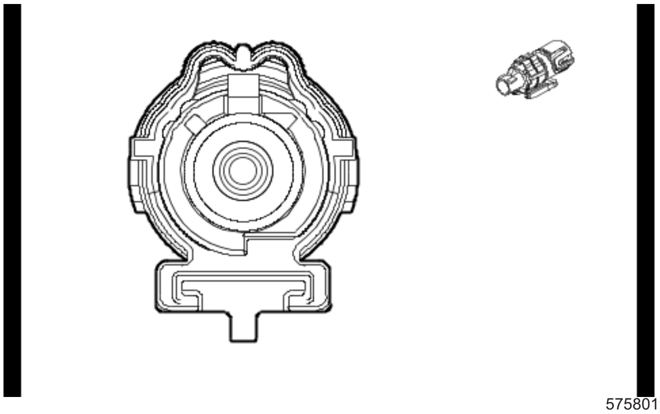


5758019

Connector Part Information

Harness Type: Body Wiring Harness COAX

OEM Connector: 35187037

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way F Coax Type(BN)

Connector Part Information

Harness Type: Chassis Wiring Harness COAX

OEM Connector: 33338239

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way M Coax Type, Sealed(BK)

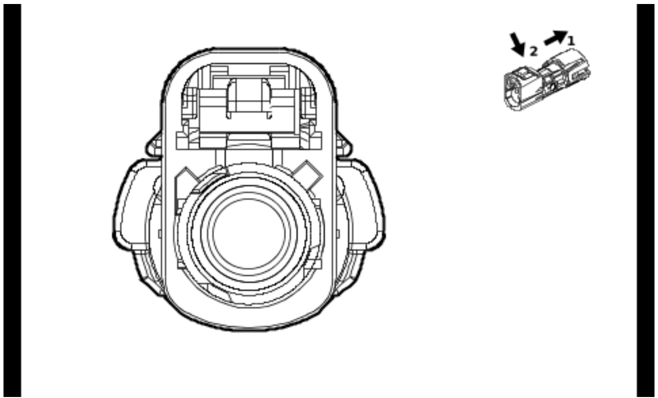
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X228 Body Wiring Harness to Chassis Wiring Harness (UVI/UVS)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	Coax Cable	—	I	—	Front Vision Camera 1 Coaxial Video Signal	—	—	Coax Cable	—	I	—

X229 Body Wiring Harness to Chassis Wiring Harness (UVI/UVS)



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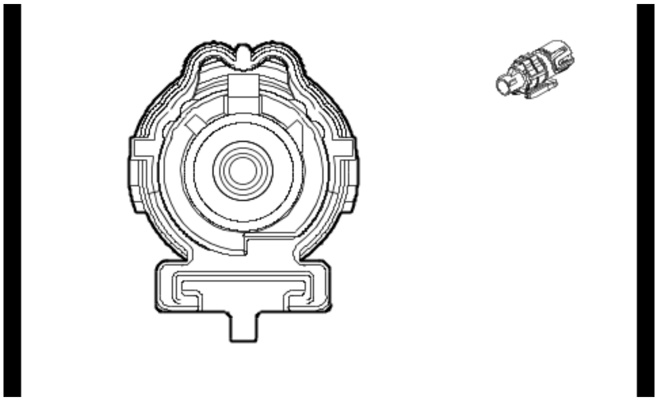


5757466

Connector Part Information

Harness Type: Body Wiring Harness COAX

OEM Connector: 35187033

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way F Coax Type(WH)

Connector Part Information

Harness Type: Chassis Wiring Harness COAX

OEM Connector: 33338240

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way M Coax Type, Sealed(WH)

Terminal Part Information

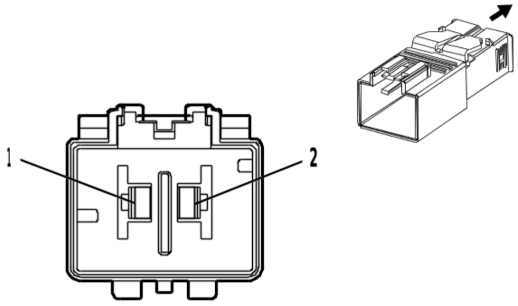
Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X229 Body Wiring Harness to Chassis Wiring Harness (UVI/UVS)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	Coax Cable	—	I	—	Front Vision Camera 1 Coaxial Video Signal	—	—	Coax Cable	—	I	—

X230 Auxiliary Heater Jumper Wiring Harness to Body Wiring Harness (C32)

—



4891120

Connector Part Information

Harness Type: Auxiliary Heater Jumper Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35134697
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M 9.5 MCON-LL Series(BK)

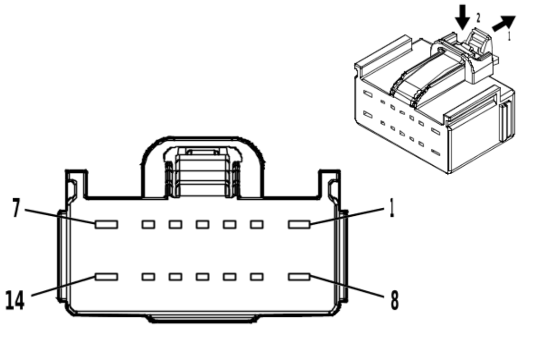
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
II	Not required	J-35616-21 (RD)	No Tool Required

X230 Auxiliary Heater Jumper Wiring Harness to Body Wiring Harness (C32)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
2	10	RD / GY	642	I	—	Battery Positive Voltage	2	10	RD / GY	642	II	—

X241 Body Wiring Harness to Body Rear Wiring Harness Extension Harness (KI5)



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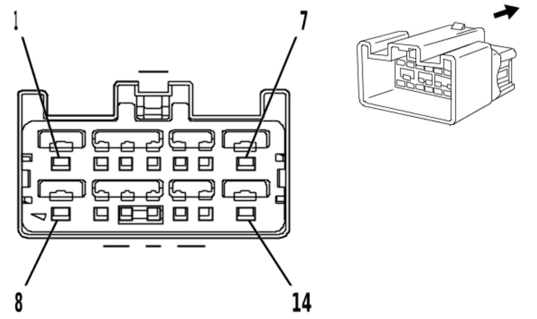


1283905

Connector Part Information

Harness Type: Body Wiring Harness

OEM Connector: 33366376

Service Connector: 13513605

Description: 14-Way F 1.5, 2.8 YESC Series(GY)

Connector Part Information

Harness Type: Body Rear Wiring Harness Extension Harness

OEM Connector: 10846900

Service Connector: Service by Harness - See Part Catalog

Description: 14-Way M 1.5, 2.8 YESC Series(L-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575850	J-35616-2A (GY)	J-38125-557
II	84962855	J-35616-4A (PU)	J-38125-11A
III	Not required	J-35616-3 (GY)	No Tool Required
IV	Not required	J-35616-5 (PU)	No Tool Required

X241 Body Wiring Harness to Body Rear Wiring Harness Extension Harness (KI5)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BK	5683	II	—	120V AC Phase A	1	0.75	BK	5683	IV	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.35	VT / YE	5985	I	—	Accessory Wake-Up Serial Data	3	0.35	VT / YE	5985	III	—
4	0.35	WH / GN	4628	I	—	DC/AC Inverter Relay Control	4	0.35	WH / GN	4628	III	—
5	0.35	BU / BN	6807	I	—	DC/AC Inverter Control	5	0.35	BU / BN	6807	III	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—
7	0.75	BK / WH	2264	II	—	120V AC Phase A 2	7	0.75	BK / WH	2264	IV	—
8	0.75	RD	5684	II	—	120V AC Phase B	8	0.75	RD	5684	IV	—
9	0.35	Bare	514	I	—	Low Reference	9	0.35	Bare	514	III	—
10	0.35	GN	5060	I	—	Low Speed GMLAN Serial Data	10	0.35	GN	5060	III	—

X241 Body Wiring Harness to Body Rear Wiring Harness Extension Harness (KI5) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
11	—	—	—	—	—	Not Occupied	11	—	—	—	—	—
12	0.75	GN / BN	2266	I	—	DC/AC Inverter Control 2	12	0.75	GN / BN	2266	III	—
13	0.35	Bare	2257	I	—	Low Reference	13	0.35	Bare	2257	III	—
14	0.75	RD / WH	2265	II	—	120V AC Phase B 2	14	0.75	RD / WH	2265	IV	—

X255 USB Receptacle Jumper Wiring Harness to Floor Console Wiring Harness (D07+(IOS/IOT))

—

Connector Part Information

Harness Type: USB Receptacle Jumper Wiring Harness USB
OEM Connector: Not Available
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F

—

Connector Part Information

Harness Type: Floor Console Wiring Harness USB
OEM Connector: Not Available
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way M

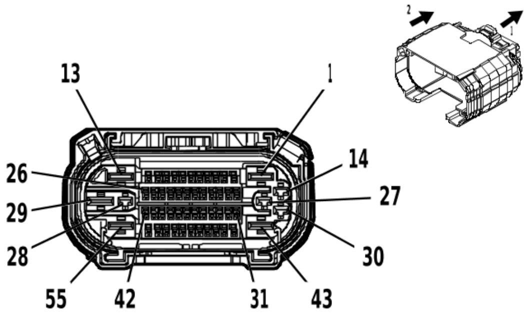
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X255 USB Receptacle Jumper Wiring Harness to Floor Console Wiring Harness (D07 +(IOS/IOT))

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	USB	—	I	—	USB Serial Data	—	—	USB	—	I	—

X256 Dome Lamp Wiring Harness to Instrument Panel Wiring Harness



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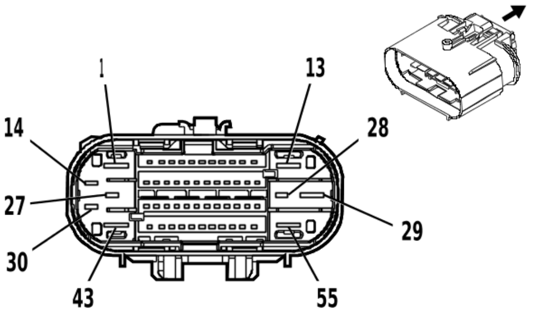


4993301

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 35196713
Service Connector: Service by Harness - See Part Catalog
Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(BK)

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35205189
Service Connector: 84727364
Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	J-35616-35 (VT)	No Tool Required
III	Not required	J-35616-40 (BU)	No Tool Required
IV	84847992	J-35616-32 (OG)	J-38125-36
V	84867140	J-35616-13 (BU)	J-38125-215A
VI	84992391	J-35616-5 (PU)	J-38125-215A

X256 Dome Lamp Wiring Harness to Instrument Panel Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	BK	1050	III	—	Ground	1	2.5	BK	1050	IV	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.35	BU / BK	7044	I	—	Microphone [-] Signal	3	0.35	BU / BK	7044	V	—
4	0.35	VT / YE	7043	I	—	Microphone [+] Signal	4	0.35	VT / YE	7043	V	—
5	0.35	BU	655	I	—	Cellular Telephone Microphone Signal	5	0.35	BU	655	V	—
6	0.35	BK / BN	654	I	—	Cellular Telephone Microphone Low Reference	6	0.35	BK / BN	654	V	—
7	0.35	BK	1782	I	—	Low Reference	7	0.35	BK	1782	V	—
8	0.35	WH / GY	3936	I	—	High Speed GMLAN Serial Data [-] 8	8	0.35	WH / BU	3936	V	—

X256 Dome Lamp Wiring Harness to Instrument Panel Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
9	0.35	BU / GY	3935	I	—	High Speed GMLAN Serial Data [+] 8	9	0.35	BU / OG	3935	V	—
10	0.35	GY	157	I	—	Interior Lamp Control	10	0.35	GY	157	V	—
11	0.35	BK / WH	1851	I	—	Signal Ground	11	0.5	BK / WH	1851	V	—
12 - 13	—	—	—	—	—	Not Occupied	12 - 13	—	—	—	—	—
14	2.5	RD / GN	3140	II	—	Battery Positive Voltage	14	2.5	RD / GN	3140	VI	—
15	0.5	WH / VT	1430	I	—	Exterior Courtesy Lamp Control	15	0.5	WH / VT	1430	V	—
16	0.35	WH / BU	5986	I	—	Serial Data Communication Enable	16	0.35	WH / BU	5986	V	—
17	0.35	BK / YE	1691	I	—	Automatic Day/Night Mirror Low Reference	17	0.35	BK / YE	1691	V	—
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—
19	0.5	WH / BN	6815	I	—	Inadvertent Load Control	19	0.5	WH / BN	6815	V	—
20	0.35	GN	2308	I	—	Passenger Air Bag Off Indicator Control	20	0.35	GN	2308	V	—
21	0.35	BU	2307	I	—	Passenger Air Bag On Indicator Control	21	0.35	BU	2307	V	—
22	0.35	YE / WH	1690	I	—	Mirror Dimming Signal	22	0.35	YE / WH	1690	V	—
23	0.35	WH	6192	I	—	Sliding Rear Window Switch Close Signal	23	0.35	WH	6192	V	—
24	0.35	GY	156	I	—	Courtesy Lamp Switch Signal	24	0.35	GY	156	V	—
25	0.35	GN	5060	I	—	Low Speed GMLAN Serial Data	25	0.35	GN	5060	V	—
26 - 29	—	—	—	—	—	Not Occupied	26 - 29	—	—	—	—	—
30	2.5	GN / BU	5989	II	—	Emergency Vehicle Lamp Relay Control	30	2.5	GN / BU	5989	VI	—
31	0.35	BN / WH	2517	I	—	Telematics Switch Red LED Indicator Control	31	0.35	BN / WH	2517	V	—

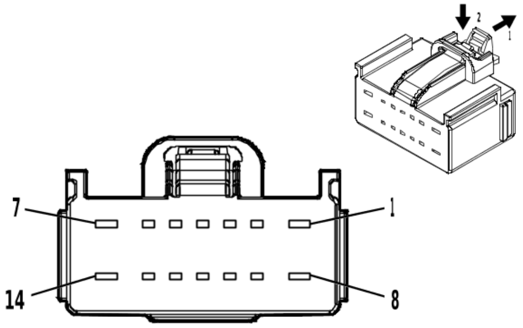
X256 Dome Lamp Wiring Harness to Instrument Panel Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
32	0.35	YE / VT	2516	I	—	Telematics Switch Green LED Indicator Control	32	0.35	YE / VT	2516	V	—
33	0.35	GN / WH	24	I	—	Backup Lamp Control	33	0.35	GN / WH	24	V	—
34	0.35	GY / GN	328	I	—	Interior Lamp Defeat Switch Signal	34	0.35	GY / GN	328	V	—
35	0.35	BU / GY	4672	I	—	Dome Lamp Off Indicator Control	35	0.35	BU / GY	4672	V	—
36	—	—	—	—	—	Not Occupied	36	—	—	—	—	—
37	0.35	GN / WH	2514	I	—	Telematics Switch Signal	37	0.35	GN / WH	2514	V	—
38	0.35	GN / BK	2515	I	—	Telematics Switch Supply Voltage	38	0.35	GN / BK	2515	V	—
39	0.5 0.5	VT / GY VT / WH	1054 5065	I I	UVO - UVO	Stop Lamp Control Stop Lamp Relay Coil Control	39	0.35	VT / GY	1054	V	—
40	0.35	WH	3152	I	—	Lane Departure Warning Indicator Control	40	0.35	WH	3152	V	—
41	0.35	GY / WH	3153	I	—	Lane Departure Warning Disable Switch Signal	41	0.35	GY / WH	3153	V	—
42	0.35	YE	6817	I	—	LED Backlight Dimming Control 1	42	0.35	YE	6817	V	—
43 - 44	—	—	—	—	—	Not Occupied	43 - 44	—	—	—	—	—
45	0.35	WH	6816	I	—	Indicator Dimming Control	45	0.35	WH	6816	V	—
46	—	—	—	—	—	Not Occupied	46	—	—	—	—	—
47	0.35	VT / GN	7558	I	—	Front Footwell Accent Lighting Control	47	0.35	VT / GN	7558	V	—
48	0.35	VT / WH	5234	I	—	Passenger Seat Belt Indicator Control	48	0.35	VT / WH	5234	V	—
49	—	—	—	—	—	Not Occupied	49	—	—	—	—	—
50	0.35	GN / BN	6132	I	—	Body Control Module LIN Bus 1	50	0.35	GN / BN	6132	V	—

X256 Dome Lamp Wiring Harness to Instrument Panel Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
51	—	—	—	—	—	Not Occupied	51	—	—	—	—	—
52	0.35	YE / VT	6191	I	—	Power Rear Window Switch Open Signal	52	0.35	YE / VT	6191	V	—
53 - 55	—	—	—	—	—	Not Occupied	53 - 55	—	—	—	—	—

X260 Auxiliary Fuse Block Wiring Harness to Instrument Panel Wiring Harness (-Z82)



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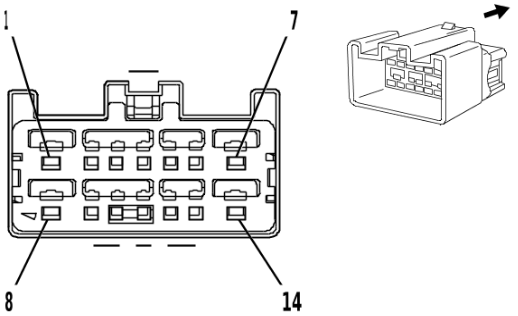


1283905

Connector Part Information

Harness Type: Auxiliary Fuse Block Wiring Harness
OEM Connector: 33366376
Service Connector: Service by Harness - See Part Catalog
Description: 14-Way F 1.5, 2.8 YESC Series(GY)

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 10846900
Service Connector: 88956523
Description: 14-Way M 1.5, 2.8 YESC Series(L-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required
III	13575818	J-35616-3 (GY)	J-38125-215A
IV	13575824	J-35616-5 (PU)	J-38125-11A

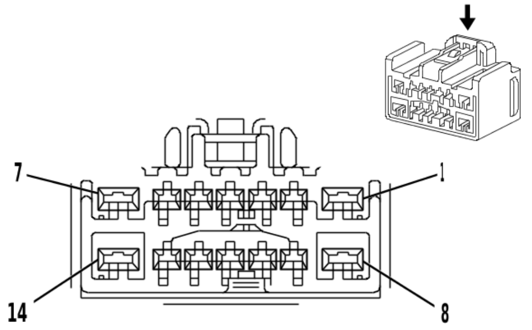
X260 Auxiliary Fuse Block Wiring Harness to Instrument Panel Wiring Harness (-Z82)

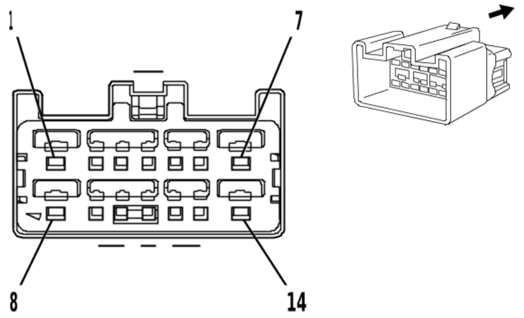
Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BK	1050	II	—	Ground	1	2	BK	1250	IV	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.35	YE	6817	I	—	LED Backlight Dimming Control 1	3	0.5	YE	6817	III	—
4	—	—	—	—	—	Not Occupied	4	—	—	—	—	—
5	0.5	WH / D-BU	3691	I	—	Trailer Brake Apply Signal	5	0.5	WH / BU	3691	III	—
6	—	—	—	—	—	Accessory Ignition Voltage	6	0.35	VT / YE	43	III	—
7	2	RD / VT	1242	II	—	Battery Positive Voltage	7	2	RD / VT	1242	IV	—
8	2.5	GN / D-BU	5989	II	—	Emergency Vehicle Lamp Relay Control	8	2.5	GN / BU	5989	IV	—
9	—	—	—	—	—	Out of Park Signal	9	0.35	YE	6812	III	—

X260 Auxiliary Fuse Block Wiring Harness to Instrument Panel Wiring Harness (-Z82) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
10	—	—	—	—	—	Vehicle Speed Signal	10	0.35	GN / GY	817	III	—
11	0.35	WH	6816	I	—	Indicator Dimming Control	11	0.35	WH	6816	III	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—
13	0.5	VT / GN	39	I	—	Run/Crank Ignition 1 Voltage	13	0.35	VT / WH	239	III	—
14	2	D-BU	47	II	—	Trailer Auxiliary Control	14	2	BU	47	IV	—

X260 Trailer Wiring Harness Extension Harness to Instrument Panel Wiring Harness (Z82)





Connector Part Information

Harness Type: Trailer Wiring Harness Extension Harness
OEM Connector: 10847017
Service Connector: 88956523
Description: 14-Way F 1.5, 2.8 YESC Series(L-GY)

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 10846900
Service Connector: 88956523
Description: 14-Way M 1.5, 2.8 YESC Series(L-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required
III	Not required	No Tool Required	No Tool Required
IV	13578907	J-35616-3 (GY)	J-38125-215A
V	13578908	J-35616-5 (PU)	J-38125-11A
VI	Not required	No Tool Required	No Tool Required

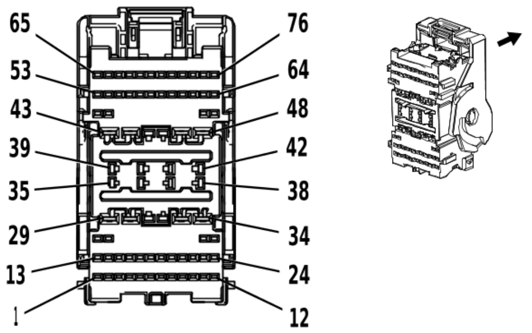
X260 Trailer Wiring Harness Extension Harness to Instrument Panel Wiring Harness (Z82)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2	BK	1250	II	—	Ground	1	2	BK	1250	V	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	—	YE	6817	III	—	LED Backlight Dimming Control 1	3	0.5	YE	6817	IV	—
4	—	WH / VT	6821	III	—	Surveillance Switch Signal	4	—	WH / VT	6821	VI	—
5	0.5	WH / BU	3691	I	—	Trailer Brake Apply Signal	5	0.5	WH / BU	3691	IV	—
6	—	—	—	—	—	Accessory Ignition Voltage	6	0.35	VT / YE	43	IV	—
7	2	RD / VT	1242	II	—	Battery Positive Voltage	7	2	RD / VT	1242	V	—
8	—	GN / BU	5989	III	—	Emergency Vehicle Lamp Relay Control	8	2.5	GN / BU	5989	V	—

X260 Trailer Wiring Harness Extension Harness to Instrument Panel Wiring Harness (Z82) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
9	—	—	—	—	—	Out of Park Signal	9	0.35	YE	6812	IV	—
10	—	—	—	—	—	Vehicle Speed Signal	10	0.35	GN / GY	817	IV	—
11	—	WH	6816	III	—	Indicator Dimming Control	11	0.35	WH	6816	IV	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—
13	—	VT / GN	39	III	—	Run/Crank Ignition 1 Voltage	13	0.35	VT / WH	239	IV	—
14	2	BU	47	II	—	Trailer Auxiliary Control	14	2	BU	47	V	—

X275 Instrument Panel Wiring Harness to Body Wiring Harness



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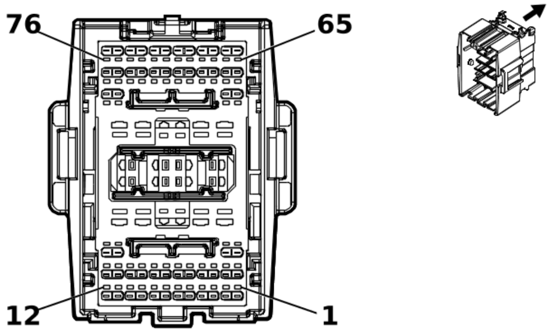


5277492

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35142991
Service Connector: 84581287
Description: 76-Way F 1.2, 1.5, 2.8 YESC Series(BK)

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35273135
Service Connector: 13526160
Description: 76-Way M 1.2 MCON-CB, 1.5, 2.8 YESC Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	13575708	J-35616-2A (GY)	J-38125-11A
II	13587516	J-35616-4A (PU)	J-38125-11A
III	84962854	J-35616-12 (BU)	J-38125-215A
IV	84616651	J-35616-13 (BU)	J-38125-215A
V	84888592	J-35616-5 (PU)	J-38125-11A
VI	85119177	J-35616-3 (GY)	J-38125-553

X275 Instrument Panel Wiring Harness to Body Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.5	RD / WH	3440	III	—	Battery Positive Voltage	2	0.5	RD / WH	3440	IV	—
3	0.5	BN / WH	3895	III	—	Roof Rail Air Bag Disable Switch Low Reference	3	0.5	BN / WH	3895	IV	—
4	0.5	BU / WH	3119	III	—	Roof Rail Air Bag Disable Switch Signal	4	0.5	BU / WH	3119	IV	—
5	0.35	GY / GN	2555	III	—	Rear Parking Assist Disable Signal	5	0.35	GY / GN	2555	IV	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—
7	0.35	VT / WH	5234	III	—	Passenger Seat Belt Indicator Control	7	0.35	VT / WH	5234	IV	—

X275 Instrument Panel Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
8	0.35	BU	2307	III	—	Passenger Air Bag On Indicator Control	8	0.35	BU	2307	IV	—
9	0.35	BU / GY	4672	III	—	Dome Lamp Off Indicator Control	9	0.35	BU / GY	4672	IV	—
10	0.35	GY	156	III	—	Courtesy Lamp Switch Signal	10	0.35	GY	156	IV	—
11	0.35	GN / BU	761	III	—	Blower Speed Feedback Signal	11	0.35	GN / BU	761	IV	—
12	0.35	GN / GY	817	III	—	Vehicle Speed Signal	12	0.35	GN / GY	817	IV	—
13	0.35	GN	2308	III	—	Passenger Air Bag Off Indicator Control	13	0.35	GN	2308	IV	—
14	0.35	VT / GY	709	III	—	Left Park Lamp Control	14	0.35	VT / GY	709	IV	—
15	0.35	YE / OG	3025	III	—	Passenger Instrument Panel Air Bag Stage 1 High Control	15	0.35	YE / OG	3025	IV	—
16	0.35	OG / WH	3024	III	—	Passenger Instrument Panel Air Bag Stage 1 Low Control	16	0.35	OG / WH	3024	IV	—
17	0.35	GY / OG	3027	III	—	Passenger Instrument Panel Air Bag Stage 2 High Control	17	0.35	GY / OG	3027	IV	—
18	0.35	OG / VT	3026	III	—	Passenger Instrument Panel Air Bag Stage 2 Low Control	18	0.35	OG / VT	3026	IV	—
19	0.35	GN / BN	6132	III	—	Body Control Module LIN Bus 1	19	0.5	GN / BN	6132	IV	—
20	0.35	GY / GN	1102	III	—	Low Speed GMLAN Serial Data 2 Low Speed GMLAN Serial Data 2	20	0.75 0.35	GY / GN GY / GN	1102 1102	IV IV	UQA- UVI- UVS UVI+ UQF
21	0.35	YE	6817	III	—	LED Backlight Dimming Control 1	21	0.35	YE	6817	IV	—
22	0.5	GN / GY	6135	III	—	Body Control Module LIN Bus 4	22	0.35	GN / GY	6135	IV	—
23 - 26	—	—	—	—	—	Not Occupied	23 - 26	—	—	—	—	—

X275 Instrument Panel Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
27	0.35	YE	7755	III	—	AC Power Outlet Status Indicator Control	27	0.35	YE	7755	IV	—
28	0.35	VT / WH	239	III	—	Run/Crank Ignition 1 Voltage	28	0.35	VT / WH	239	IV	—
29	2	BK	1250	II	—	Ground	29	2	BK	1250	V	—
30	0.5	RD / GN	5140	II	—	Battery Positive Voltage	30	0.5	RD / GN	5140	V	—
31	0.5	BK / WH	2751	I	—	Signal Ground	31	0.75	BK / WH	2751	VI	—
32	—	—	—	—	—	Not Occupied	32	—	—	—	—	—
33	0.75	WH / YE	1853	II	—	Right Front Midrange Speaker [+] Control	33	0.75	WH / YE	1853	V	—
34	0.75	BN / BK	1953	II	—	Right Front Midrange Speaker [-] Control	34	0.75	BN / BK	1953	V	—
35	0.35	GY	1198	I	—	Endgate Release Switch Analog Signal Interior	35	0.35	GY	1198	VI	—
36	0.5	WH / BU	3691	I	—	Trailer Brake Apply Signal	36	0.5	WH / BU	3691	VI	—
37	0.35	RD / WH	1340	I	—	Battery Positive Voltage	37	0.35	RD / WH	1340	VI	—
38 - 39	—	—	—	—	—	Not Occupied	38 - 39	—	—	—	—	—
40	0.35	GN / WH	24	I	—	Backup Lamp Control	40	0.35	GN / WH	24	VI	—
41	0.5	WH / VT	1430	I	—	Exterior Courtesy Lamp Control	41	1	WH / VT	1430	VI	—
42	0.35	VT / BN	300	I	—	Run Ignition 3 Voltage	42	0.35	VT / BN	300	VI	—
43	2	BU	47	II	—	Trailer Auxiliary Control	43	2	BU	47	V	—
44	2	RD / VT	1242	II	—	Battery Positive Voltage	44	2	RD / VT	1242	V	—
45	0.75	BK / WH	2751	I	—	Signal Ground	45	0.75	BK / WH	2751	VI	—
46	0.35	VT / BU	6091	I	—	Crankshaft Position Sensor Replicated Signal	46	0.35	VT / BU	6091	VI	—
47	0.75	YE / BK	117	II	—	Right Front Speaker [-] Control 1	47	0.75	YE / BK	117	V	—
48	0.75	YE	200	II	—	Right Front Speaker 1 [+] Control	48	0.75	YE	200	V	—

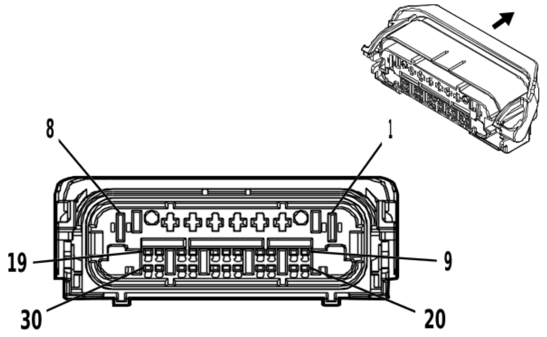
X275 Instrument Panel Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
49 - 50	—	—	—	—	—	Not Occupied	49 - 50	—	—	—	—	—
51	0.5	WH	46	III	—	Right Rear Speaker [+] Control	51	0.5	WH	46	IV	—
52	0.5	BU / BK	115	III	—	Right Rear Speaker [-] Control	52	0.5	BU / BK	115	IV	—
53	—	—	—	—	—	Not Occupied	53	—	—	—	—	—
54	0.35	GY / WH	3272	III	—	Remote Control Door Lock Receiver Control	54	0.35	GY / WH	3272	IV	—
55	0.35	BU / WH	3275	III	—	Remote Control Door Lock Receiver Receive Signal	55	0.35	BU / WH	3275	IV	—
56	0.35	YE / GN	3274	III	—	Remote Control Door Lock Receiver Transmit Signal	56	0.35	YE / GN	3274	IV	—
57	0.35	GY	3273	III	—	Remote Control Door Lock Receiver Low Reference	57	0.35	GY	3273	IV	—
58	0.5	BN / VT	193	III	—	Rear Defogger Relay Control	58	0.5	BN / VT	193	IV	—
59	0.35	YE	6812	III	—	Out of Park Signal	59	0.35	YE	6812	IV	—
60	0.35	YE / RD	2415	III	—	Park Brake Switch Voltage Reference 2	60	0.35	YE / RD	2415	IV	—
61	0.35	GY / RD	2414	III	—	Park Brake Switch Voltage Reference 1	61	0.35	GY / RD	2414	IV	—
62	0.35	BU / BK	2416	III	—	Park Brake Switch Monitor Signal 1	62	0.35	BU / BK	2416	IV	—
63	0.35	WH / GN	1305	III	—	High Speed GMLAN Serial Data [-] 9	63	0.5	WH / GN	1305	IV	—
64	0.35	BU / GN	1304	III	—	High Speed GMLAN Serial Data [+] 9	64	0.5	BU / GN	1304	IV	—
65	0.35	BN	2417	III	—	Park Brake Switch Monitor Signal 2	65	0.35	BN	2417	IV	—
66	0.35	Bare	6974	III	—	Rearview Camera Low Reference	66	0.35	Bare	6974	IV	—

X275 Instrument Panel Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
67	0.35	GY / YE	6972	III	—	Rearview Camera Signal [+]	67	0.35	GY / YE	6972	IV	—
68	0.35	WH / BU	6973	III	—	Rearview Camera Signal [-]	68	0.35	WH / BU	6973	IV	—
69	0.35	GN / BN	5852	III	—	Rear Parking Assist Disable LED Signal	69	0.35	GN / BN	5852	IV	—
70	0.35	VT / YE	43	III	—	Accessory Ignition Voltage	70	0.35	VT / YE	43	IV	—
71	0.35	YE	2418	III	—	Park Brake Switch Test Signal	71	0.35	YE	2418	IV	—
72	0.35	BU / VT	1134	III	—	Park Brake Switch Signal	72	0.35	BU / VT	1134	IV	—
73	0.35	VT / GY	1054	III	—	Stop Lamp Relay Coil Control Stop Lamp Control	73	0.35 0.35	VT / WH VT / GY	5065 1054	IV IV	CREW CAB/ UTILITY/ EXTENDED CAB REGULAR CAB
74	0.35	BN	7291	III	—	Major Endgate Release Switch Signal Interior	74	0.35	BN	7291	IV	—
75 - 76	—	—	—	—	—	Not Occupied	75 - 76	—	—	—	—	—

X302 Diesel Exhaust Fluid Control Jumper Wiring Harness to Chassis Wiring Harness (L5P)



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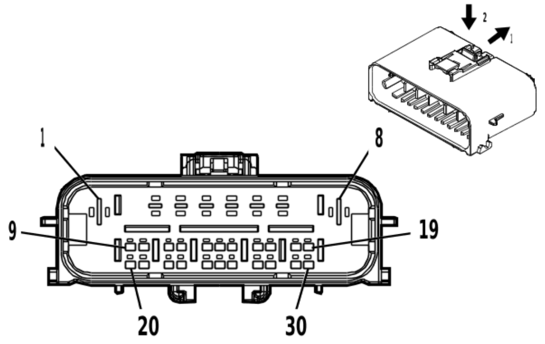

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Connector Part Information

Harness Type: Diesel Exhaust Fluid Control Jumper Wiring Harness

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 30-Way F

Connector Part Information

Harness Type: Chassis Wiring Harness

OEM Connector: 35099030

Service Connector: 19371177

Description: 30-Way M 1.2 MCON-CB, 2.8 MCP Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
II	13575376	J-35616-32 (OG)	J-38125-36
III	13578827	J-35616-5 (PU)	J-38125-36
IV	19330704	J-35616-13 (BU)	J-38125-215A

X302 Diesel Exhaust Fluid Control Jumper Wiring Harness to Chassis Wiring Harness (L5P)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	BU	3921	I	—	Diesel Exhaust Fluid Heater Control 1	1	2.5	BU	3921	II	—
2	1	RD / WH	3440	I	—	Battery Positive Voltage	2	1	RD / WH	3440	III	—
3 - 6	—	—	—	—	—	Not Occupied	3 - 6	—	—	—	—	—
7	0.75	BK / WH	1651	I	—	Signal Ground	7	0.75	BK / WH	1651	III	—
8	2.5	BK / WH	1651	I	—	Signal Ground	8	2.5	BK / WH	1651	II	—
9 - 10	—	—	—	—	—	Not Occupied	9 - 10	—	—	—	—	—
11	0.5	BU / BN	4498	I	—	High Speed GMLAN Serial Data [+] 7	11	0.5	BU / BN	4498	IV	—
12	0.5	WH	4499	I	—	High Speed GMLAN Serial Data [-] 7	12	0.5	WH	4499	IV	—

X302 Diesel Exhaust Fluid Control Jumper Wiring Harness to Chassis Wiring Harness (L5P) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
13	—	—	—	—	—	Not Occupied	13	—	—	—	—	—
14	0.5	VT / GN	4320	I	—	Powertrain Sensor Bus Enable	14	0.5	VT / GN	4320	IV	—
15	0.5	VT / YE	5985	I	—	Accessory Wake-Up Serial Data	15	0.5	VT / YE	5985	IV	—
16	0.5	BU	2500	I	—	High Speed GMLAN Serial Data [+] 1	16	0.5	BU	2500	IV	—
17	0.5	WH	2501	I	—	High Speed GMLAN Serial Data [-] 1	17	0.5	WH	2501	IV	—
18 - 21	—	—	—	—	—	Not Occupied	18 - 21	—	—	—	—	—
22	0.5	BU / BN	4498	I	—	High Speed GMLAN Serial Data [+] 7	22	0.5	BU / BN	4498	IV	—
23	0.5	WH	4499	I	—	High Speed GMLAN Serial Data [-] 7	23	0.5	WH	4499	IV	—
24	—	—	—	—	—	Not Occupied	24	—	—	—	—	—
25	0.5	VT / GN	439	I	—	Run/Crank Ignition 1 Voltage	25	0.5	VT / GN	439	IV	—
26	—	—	—	—	—	Not Occupied	26	—	—	—	—	—
27	0.5	BU	2500	I	—	High Speed GMLAN Serial Data [+] 1	27	0.5	BU	2500	IV	—
28	0.5	WH	2501	I	—	High Speed GMLAN Serial Data [-] 1	28	0.5	WH	2501	IV	—
29 - 30	—	—	—	—	—	Not Occupied	29 - 30	—	—	—	—	—

X308 Body COAX Wiring Harness to Chassis COAX Wiring Harness (UVB)

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Connector Part Information

Harness Type: Body COAX Wiring Harness COAX

OEM Connector: Not Available

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way F

—

Connector Part Information

Harness Type: Chassis COAX Wiring Harness COAX

OEM Connector: Not Available

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way M

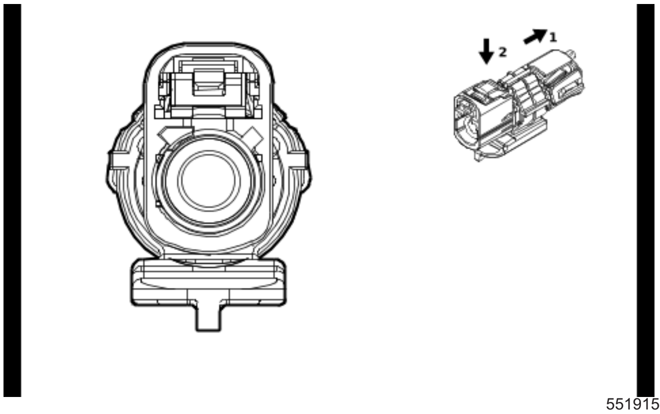
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X308 Body COAX Wiring Harness to Chassis COAX Wiring Harness (UVB)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	Coax Cable	—	I	—	(AM/FM) Antenna RF Signal	—	—	Coax Cable	—	I	—

X309 Body Wiring Harness to Cargo Camera Jumper Wiring Harness (UVN)



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Connector Part Information

Harness Type: Body Wiring Harness COAX
OEM Connector: 35187047
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way F Coax Type, Sealed(BK)

Connector Part Information

Harness Type: Cargo Camera Jumper Wiring Harness COAX
OEM Connector: Not Available
Service Connector: Service by Cable Assembly — See Part Catalog
Description: 1-Way M (BK)

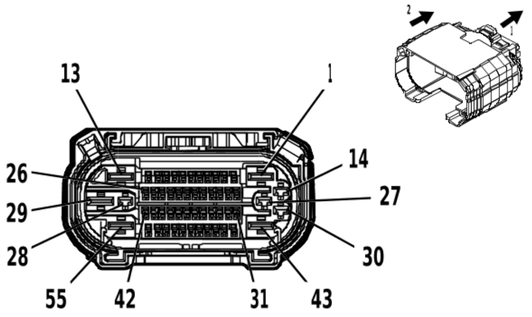
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X309 Body Wiring Harness to Cargo Camera Jumper Wiring Harness (UVN)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	Coax Cable	—	I	—	Rear Vision Camera Co-axial Video Signal	—	—	Coax Cable	—	I	—

X310 Driver Seat Wiring Harness to Body Wiring Harness



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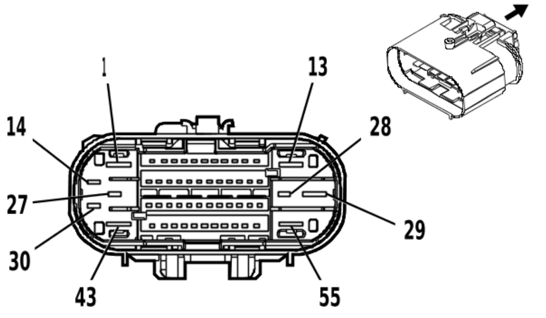


4993301

Connector Part Information

Harness Type: Driver Seat Wiring Harness

OEM Connector: 35253719

Service Connector: Service by Harness - See Part Catalog

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(BK)

Connector Part Information

Harness Type: Body Wiring Harness

OEM Connector: 35205186

Service Connector: 84727364

Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	J-35616-42 (RD)	No Tool Required
III	Not required	J-35616-43 (RD)	No Tool Required
IV	Not required	No Tool Required	No Tool Required
V	84847992	J-35616-32 (OG)	J-38125-36
VI	84867140	J-35616-13 (BU)	J-38125-215A

X310 Driver Seat Wiring Harness to Body Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	BK	1150	II	—	Ground	1	2.5	BK	1150	V	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.5	GN / WH	7530	I	—	Driver Seat Adjuster Memory Module LIN Bus 1	3	0.35	GN / WH	7530	VI	—
4	0.5	RD / BN	1140	I	—	Battery Positive Voltage	4	0.35	RD / BN	1140	VI	—
5	0.5	GN	5060	I	—	Low Speed GMLAN Serial Data	5	0.35	GN	5060	VI	—
6	0.5	BU / GN	614	I	—	Seat Memory Switch Set Signal	6	0.35	BU / GN	614	VI	—
7	0.5	BK / BU	5978	I	—	Memory Switch Low Reference	7	0.35	BK / BU	5978	VI	—

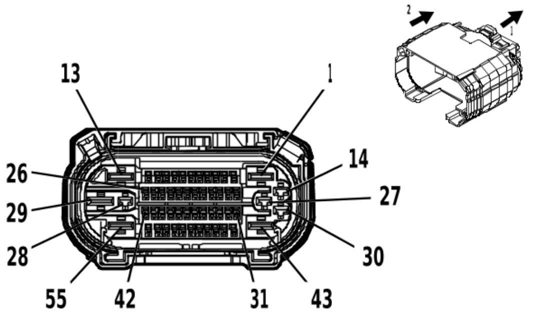
X310 Driver Seat Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
8	0.5	WH	615	I	—	Seat Memory Switch Signal 1	8	0.35	WH	615	VI	—
9	—	—	—	—	—	Not Occupied	9	—	—	—	—	—
10	0.5	BK / YE	2080	I	—	Driver Heated Seat Thermistor Low Reference	10	0.35	BK / YE	2080	VI	—
11	0.5	YE / GY	2079	I	—	Driver Seat Heating Temperature Sensor Signal	11	0.35	YE / GY	2079	VI	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—
13	2.5	RD / YE	5040	II	—	Battery Positive Voltage	13	2.5	RD / YE	5040	V	—
14	—	—	—	—	—	Not Occupied	14	—	—	—	—	—
15	0.75	BN / VT	2077	I	—	Driver Seat Heating Element Control	15	0.75	BN / VT	2077	VI	—
16	0.75	BN / BK	2078	I	—	Driver Seat Heating Element Low Reference	16	0.75	BN / BK	2078	VI	—
17	0.5	BK / VT	2426	I	—	Driver Heated Back Thermistor Low Reference	17	0.35	BK / VT	2426	VI	—
18	0.5	BU	2425	I	—	Driver Seat Back Heating Temperature Sensor Signal	18	0.35	BU	2425	VI	—
19	0.75	BN	2432	I	—	Driver Seat Back Heating Element Control	19	0.75	BN	2432	VI	—
20	0.5	GN / VT	5906	I	—	Driver Seat Blower Motor Control 1	20	0.35	GN / VT	5906	VI	—
21	0.75	VT / WH	4939	I	—	Run/Crank Ignition 1 Voltage	21	0.5	VT / WH	4939	VI	—
22 - 28	—	—	—	—	—	Not Occupied	22 - 28	—	—	—	—	—
29	0.75	RD / YE	8840	III	—	Battery Positive Voltage	29	0.75	RD / YE	8840	V	—
30 - 31	—	—	—	—	—	Not Occupied	30 - 31	—	—	—	—	—
32	0.35	OG / BN	238	I	—	Driver Seat Belt Switch Signal	32	0.35	OG / BN	238	VI	—

X310 Driver Seat Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
33	0.5	BK / OG	1363	I	—	Driver Seat Belt Switch Low Reference	33	0.35	BK / OG	1363	VI	—
34	—	—	—	—	—	Not Occupied	34	—	—	—	—	—
35	0.5	OG / BU	3068	IV	—	Driver Seat Side Air Bag High Control	35	0.5	OG / BU	3068	VI	—
36	0.5	GN / OG	3069	IV	—	Driver Seat Side Air Bag Low Control	36	0.5	GN / OG	3069	VI	—
37 - 55	—	—	—	—	—	Not Occupied	37 - 55	—	—	—	—	—

X320 Passenger Seat Wiring Harness to Body Wiring Harness



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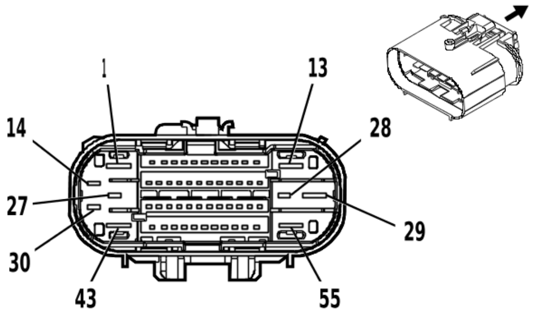


4993301

Connector Part Information

Harness Type: Passenger Seat Wiring Harness
OEM Connector: 35253720
Service Connector: Service by Harness - See Part Catalog
Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(BK)

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35205187
Service Connector: 84727364
Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	J-35616-35 (VT)	No Tool Required
III	Not required	J-35616-42 (RD)	No Tool Required
IV	Not required	J-35616-43 (RD)	No Tool Required
V	Not required	No Tool Required	No Tool Required
VI	84847992	J-35616-32 (OG)	J-38125-36
VII	84867140	J-35616-13 (BU)	J-38125-215A
VIII	84992391	J-35616-5 (PU)	J-38125-215A

X320 Passenger Seat Wiring Harness to Body Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5 0.75	BK BK	1250 1250	III IV	A7K/ KA1/ KQV KA1- A7K	Ground Ground	1	2.5	BK	1250	VI	—
2 - 8	—	—	—	—	—	Not Occupied	2 - 8	—	—	—	—	—
9	0.5	GN / BU	6133	I	—	Body Control Module LIN Bus 2	9	0.35	GN / BU	6133	VII	—
10	0.5	BK / YE	2080	I	—	Driver Heated Seat Thermistor Low Reference	10	0.35	BK / YE	2080	VII	—
11	0.5	YE / GY	2079	I	—	Driver Seat Heating Temperature Sensor Signal	11	0.35	YE / GY	2079	VII	—

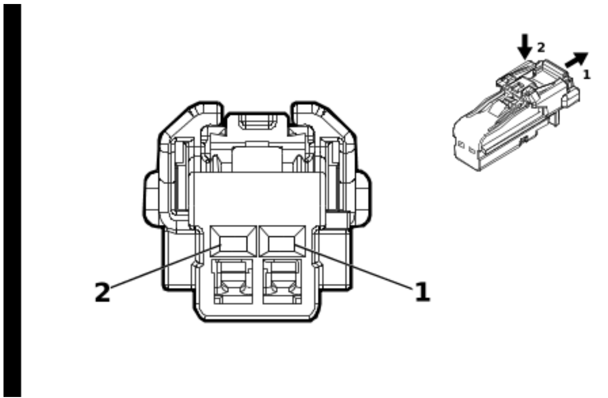
X320 Passenger Seat Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—
13	2.5	RD / BN	1440	III	—	Battery Positive Voltage	13	2.5	RD / BN	1440	VI	—
14	0.75	RD	6140	II	—	Battery Positive Voltage	14	0.5	RD	6140	VIII	—
15	0.75	BN / VT	2077	I	—	Driver Seat Heating Element Control	15	0.75	BN / VT	2077	VII	—
16	0.75	BN / BK	2078	I	—	Driver Seat Heating Element Low Reference	16	0.75	BN / BK	2078	VII	—
17	0.5	BK / VT	2426	I	—	Driver Heated Back Thermistor Low Reference	17	0.35	BK / VT	2426	VII	—
18	0.5	BU	2425	I	—	Driver Seat Back Heating Temperature Sensor Signal	18	0.35	BU	2425	VII	—
19	0.75	BN	2432	I	—	Driver Seat Back Heating Element Control	19	0.75	BN	2432	VII	—
20	0.35	GN / VT	5906	I	—	Driver Seat Blower Motor Control 1	20	0.35	GN / VT	5906	VII	—
21	0.75	VT / WH	4939	I	—	Run/Crank Ignition 1 Voltage	21	0.5	VT / WH	4939	VII	—
22	0.5	RD / GN	4440	I	—	Battery Positive Voltage	22	0.5	RD / GN	4440	VII	—
23	0.5	GN	5060	I	—	Low Speed GMLAN Serial Data	23	0.35	GN	5060	VII	—
24	0.5	GY / OG	3946	I	—	Passenger Automatic Locking Retractor Switch Low Reference	24	0.5	GY / OG	3946	VII	—
25	0.5	OG / BN	3947	I	—	Passenger Automatic Locking Retractor Switch Signal	25	0.5	OG / BN	3947	VII	—
26	0.5	BK / WH	2551	I	—	Signal Ground	26	0.5	BK / WH	2551	VII	—
27	0.75	RD / GN	5140	II	—	Battery Positive Voltage	27	0.5	RD / GN	5140	VIII	—
28	—	—	—	—	—	Not Occupied	28	—	—	—	—	—
29	0.75	RD / YE	8840	IV	—	Battery Positive Voltage	29	0.75	RD / YE	8840	VI	—

X320 Passenger Seat Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
30 - 31	—	—	—	—	—	Not Occupied	30 - 31	—	—	—	—	—
32	0.35	OG / VT	1362	I	—	Passenger Seat Belt Switch Signal	32	0.35	OG / VT	1362	VII	—
33	0.5	BK / OG	1361	I	—	Passenger Seat Belt Switch Low Reference	33	0.35	BK / OG	1361	VII	—
34	—	—	—	—	—	Not Occupied	34	—	—	—	—	—
35	0.5	OG / GY	3066	V	—	Passenger Seat Side Air Bag High Control	35	0.35	OG / GY	3066	VII	—
36	0.5	BN / OG	3067	V	—	Passenger Seat Side Air Bag Low Control	36	0.35	BN / OG	3067	VII	—
37 - 55	—	—	—	—	—	Not Occupied	37 - 55	—	—	—	—	—

X335 Headliner Wiring Harness to Instrument Panel Wiring Harness (U01)



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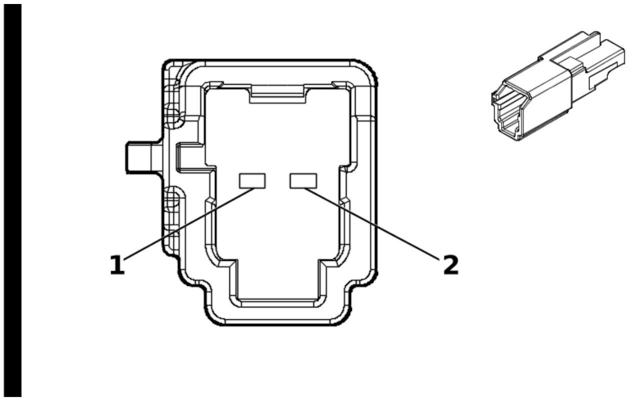


5355341

Connector Part Information

Harness Type: Headliner Wiring Harness
OEM Connector: 35311666
Service Connector: 87816612
Description: 2-Way F 1.2 MCON Series(BK)

Connector Part Information

Harness Type: Instrument Panel Wiring Harness
OEM Connector: 35258943
Service Connector: 84815531
Description: 2-Way M 1.2 MCON Series(BK)

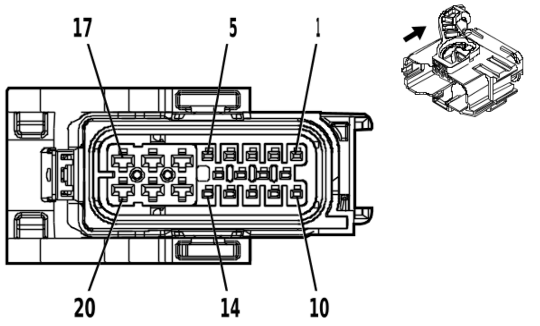
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	J-35616-17 (L-GN)	No Tool Required

X335 Headliner Wiring Harness to Instrument Panel Wiring Harness (U01)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	BK	1050	I	—	Ground	1	0.5	BK	1050	II	—
2	0.35	VT / GY	709	I	—	Left Park Lamp Control	2	0.35	VT / GY	709	II	—

X348 Body Wiring Harness to Front Floor Console Wiring Harness



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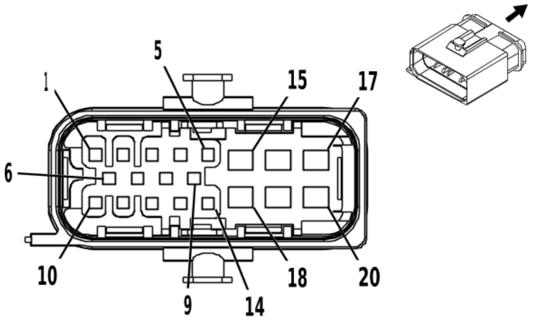


3825586

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 13974124
Service Connector: 19371189
Description: 20-Way F 1.2 MCON, 2.8 MCP Series, Sealed(BK)

Connector Part Information

Harness Type: Front Floor Console Wiring Harness
OEM Connector: 13942796
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way M 1.2, 2.8 MCP Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19300446	J-35616-12 (BU)	J-38125-12A
II	19368624	J-35616-35 (VT)	J-38125-212
III	Not required	J-35616-17 (L-GN)	No Tool Required
IV	Not required	J-35616-5 (PU)	No Tool Required

X348 Body Wiring Harness to Front Floor Console Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.35	YE	6817	I	—	LED Backlight Dimming Control 1	2	0.5	YE	6817	III	—
3	0.35	GN / VT	7533	I	—	Immobilizer LIN Bus 1 Immobilizer LIN Bus 1	3	0.35	GN / VT	7533	III	—
4	0.35	GN / GY	3277	I	—	Vehicle Anti-Theft System Immobilizer Low Reference Vehicle Anti-Theft System Immobilizer Low Reference	4	0.5 0.35	GN / GY GN / GY	3277 3277	III III	- BTM BTM+ D07

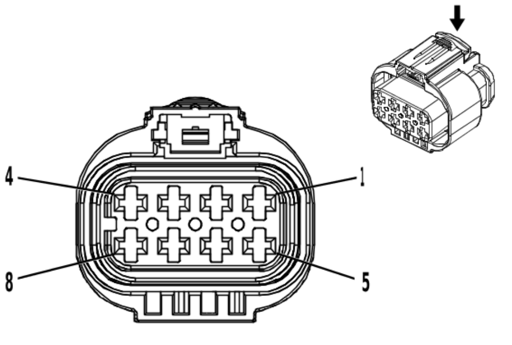
X348 Body Wiring Harness to Front Floor Console Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
5	0.35	GY / BK	3276	I	—	Immobilizer Control Module Control Immobilizer Control Module Control	5	0.5 0.35	GY / BK GY / BK	3276 3276	III III	- BTM BTM+ D07
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—
7	0.35	RD / WH	1340	I	—	Battery Positive Voltage Battery Positive Voltage	7	0.5 0.35	RD / WH RD / WH	1340 1340	III III	- BTM D07+ KA6
8	0.35	GN / WH	4115	I	—	Body Control Module LIN Bus 5	8	0.35	GN / WH	4115	III	—
9	0.35	VT / YE	143	I	—	Accessory Ignition Voltage Accessory Ignition Voltage	9	0.5	VT / YE	143	III	—
10	0.5	BK / WH	2751	I	—	Signal Ground	10	0.5	BK / WH	2751	III	—
11	0.35	VT	4601	I	—	Retained Accessory Power Control	11	0.5	VT	4601	III	—
12	0.35	GN	4512	I	—	Wireless Charging System Charge Indicator Control	12	0.35	GN	4512	III	—
13	0.35	GY / BK	3555	I	—	Interior Passive Entry Antenna 2 Low Signal Interior Passive Entry Antenna 2 Low Signal	13	0.5	GY / BK	3555	III	—
14	0.35	BU	3554	I	—	Interior Passive Entry Antenna 2 High Signal Interior Passive Entry Antenna 2 High Signal	14	0.5	BU	3554	III	—
15	1.5	RD / WH	1040	II	—	Battery Positive Voltage Battery Positive Voltage	15	1.5	RD / WH	1040	IV	—
16	0.5	WH / BN	6815	II	—	Inadvertent Load Control	16	0.5	WH / BN	6815	IV	—
17	1.5	BK	1250	II	—	Ground Ground	17	0.5 1	BK BK	1250 1250	IV IV	D07 K4C/ KA6/ D07
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—

X348 Body Wiring Harness to Front Floor Console Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
19	0.35	BN	4511	II	—	Wireless Charging System Fault Indicator Control	19	0.5	BN	4511	IV	—
20	2	BK	1250	II	—	Ground	20	2	BK	1250	IV	A50/ D07 (AE7/ AZ3)
						Ground		2	BK	1150	IV	

X350 Chassis Wiring Harness to Fuel Tank Wiring Harness (L5P+N2L)



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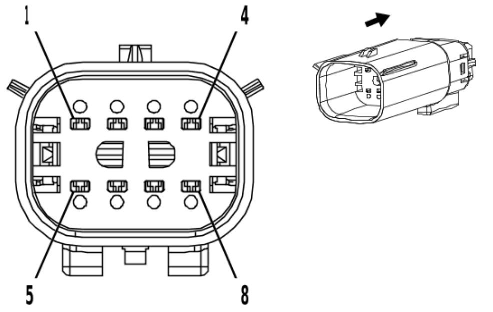


2667653

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33180742
Service Connector: 19354078
Description: 8-Way F 2.8 Series, Sealed(L-GY)

Connector Part Information

Harness Type: Fuel Tank Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M (L-GY)

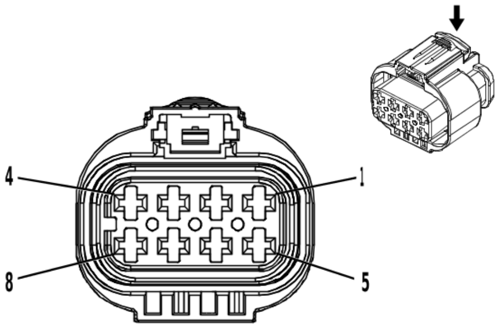
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required
II	Not required	No Tool Required	No Tool Required

X350 Chassis Wiring Harness to Fuel Tank Wiring Harness (L5P+N2L)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	GY	120	I	—	Fuel Pump Control	1	2.5	GY	120	II	—
2	2.5	YE / GY	4137	I	—	Fuel Pump Supply Voltage Phase 2	2	2.5	YE / GY	4137	II	—
3	2.5	WH / BN	4138	I	—	Fuel Pump Supply Voltage Phase 3	3	2.5	WH / BN	4138	II	—
4	0.5	BN	7444	I	—	Fuel Pump Assembly Shield Ground	4	0.5	BN	7444	II	—
5	0.5	BU / VT	1589	I	—	Primary Fuel Level Sensor Signal	5	0.5	BU / VT	1589	II	—
6	0.5	BK / GN	6281	I	—	Fuel Level Sensor Low Reference	6	0.5	BK / GN	6281	II	—
7 - 8	—	—	—	—	—	Not Occupied	7 - 8	—	—	—	—	—

X350 Chassis Wiring Harness to Fuel Tank Wiring Harness (L5P+N2N)



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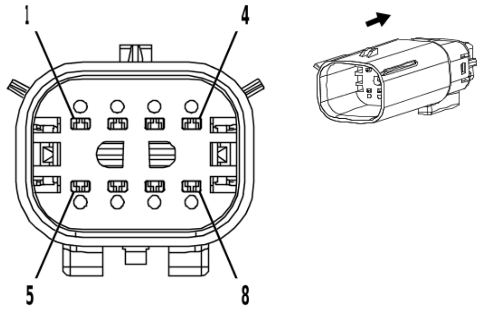


2667653

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33180742
Service Connector: 19354078
Description: 8-Way F 2.8 Series, Sealed(L-GY)

Connector Part Information

Harness Type: Fuel Tank Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M (L-GY)

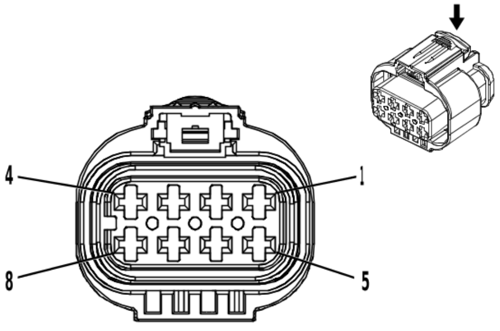
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required
II	Not required	No Tool Required	No Tool Required

X350 Chassis Wiring Harness to Fuel Tank Wiring Harness (L5P+N2N)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	GY	120	I	—	Fuel Pump Control	1	2.5	GY	120	II	—
2	2.5	YE / GY	4137	I	—	Fuel Pump Supply Voltage Phase 2	2	2.5	YE / GY	4137	II	—
3	2.5	WH / BN	4138	I	—	Fuel Pump Supply Voltage Phase 3	3	2.5	WH / BN	4138	II	—
4	0.5	BN	7444	I	—	Fuel Pump Assembly Shield Ground	4	0.5	BN	7444	II	—
5	0.5 0.75	BU / VT BU / VT	1589 1589	I I	- FHS L5P	Primary Fuel Level Sensor Signal Primary Fuel Level Sensor Signal	5	0.5 0.75	BU / VT BU / VT	1589 1589	II II	- FHS L5P
6	0.5	BK / GN	6281	I	—	Fuel Level Sensor Low Reference	6	0.5	BK / GN	6281	II	—
7 - 8	—	—	—	—	—	Not Occupied	7 - 8	—	—	—	—	—

X350 Chassis Wiring Harness to Fuel Tank Wiring Harness (L8T+N2N)



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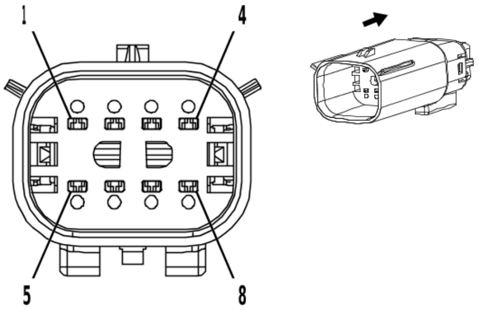


2667653

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33180742
Service Connector: 19354078
Description: 8-Way F 2.8 Series, Sealed(L-GY)

Connector Part Information

Harness Type: Fuel Tank Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M (L-GY)

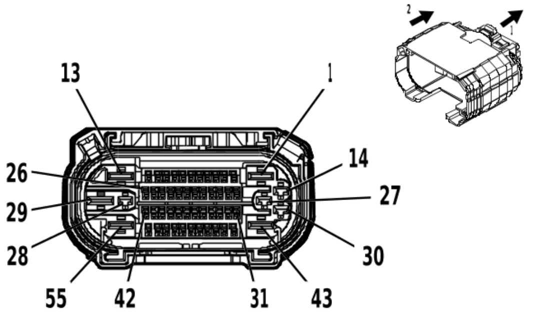
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required
II	Not required	No Tool Required	No Tool Required

X350 Chassis Wiring Harness to Fuel Tank Wiring Harness (L8T+N2N)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	GY	120	I	—	Fuel Pump Control	1	2.5	GY	120	II	—
2	2.5	YE / GY	4137	I	—	Fuel Pump Supply Voltage Phase 2	2	2.5	YE / GY	4137	II	—
3	2.5	WH / BN	4138	I	—	Fuel Pump Supply Voltage Phase 3	3	2.5	WH / BN	4138	II	—
4	0.5	BN	7444	I	—	Fuel Pump Assembly Shield Ground	4	0.5	BN	7444	II	—
5	0.5	BU / VT	1589	I	—	Primary Fuel Level Sensor Signal	5	0.5	BU / VT	1589	II	—
6	0.5	BK / GN	6281	I	—	Fuel Level Sensor Low Reference	6	0.5	BK / GN	6281	II	—
7 - 8	—	—	—	—	—	Not Occupied	7 - 8	—	—	—	—	—

X351 Chassis Wiring Harness to Fuel Pump Power Control Module Wiring Harness (L5P+N2N)



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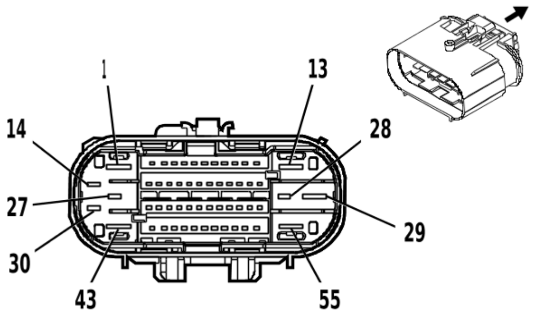


4993301

Connector Part Information

Harness Type: Chassis Wiring Harness

OEM Connector: 35016652

Service Connector: 19371185

Description: 55-Way F 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(BK)

Connector Part Information

Harness Type: Fuel Pump Power Control Module Wiring Harness

OEM Connector: 35205173

Service Connector: Service by Harness - See Part Catalog

Description: 55-Way M 1.2 OCS, 2.8, 6.3 CTS Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	19332901	J-35616-35 (VT)	J-38125-212
II	19370818	J-35616-12 (BU)	J-38125-215A
III	19371217	J-35616-12 (BU)	J-38125-215A
IV	84634921	J-35616-42 (RD)	J-38125-212
V	Not required	J-35616-13 (BU)	No Tool Required
VI	Not required	J-35616-17 (L-GN)	No Tool Required
VII	Not required	J-35616-32 (OG)	No Tool Required
VIII	Not required	J-35616-5 (PU)	No Tool Required

X351 Chassis Wiring Harness to Fuel Pump Power Control Module Wiring Harness (L5P+N2N)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	GY	120	IV	—	Fuel Pump Control	1	2.5	GY	120	VII	—
2	0.75	YE / BU	1465	II	—	Secondary Fuel Pump Relay Control	2	0.75	YE / BU	1465	V	—
3	—	—	—	—	—	Not Occupied	3	—	—	—	—	—
4	0.5	BK / VT	412	II	—	Fuel Filter Temperature Sensor Low Reference	4	0.5	BK / VT	412	VI	—
5	—	—	—	—	—	Not Occupied	5	—	—	—	—	—

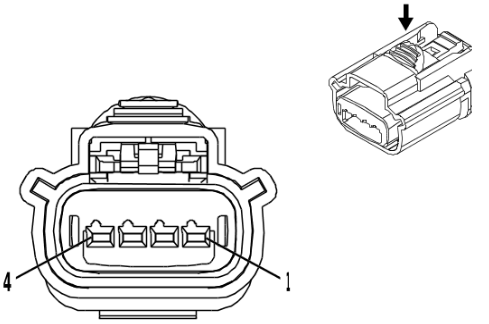
X351 Chassis Wiring Harness to Fuel Pump Power Control Module Wiring Harness (L5P +N2N) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
6	0.5	VT / GN	439	II	—	Run/Crank Ignition 1 Voltage	6	0.5	VT / GN	439	VI	—
7	—	—	—	—	—	Not Occupied	7	—	—	—	—	—
8	0.5	BN / VT	455	II	—	Fuel Filter Temperature Signal	8	0.5	BN / VT	455	VI	—
9	—	—	—	—	—	Not Occupied	9	—	—	—	—	—
10	0.5	GN / GY	465	II	—	Fuel Pump Primary Relay Control	10	0.5	GN / GY	465	VI	—
11	—	—	—	—	—	Not Occupied	11	—	—	—	—	—
12	0.75	BU / VT	1589	II	—	Primary Fuel Level Sensor Signal	12	0.75	BU / VT	1589	V	—
13	1	BK / GN	1580	IV	—	Fuel Pump Low Reference	13	1	BK / GN	1580	VII	—
14	2.5	RD / VT	5340	I	—	Battery Positive Voltage	14	2.5	RD / VT	5340	VIII	—
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	0.5	BU / WH	1937	II	—	Secondary Fuel Level Sensor Signal	16	0.5	BU / WH	1937	VI	—
17	—	—	—	—	—	Not Occupied	17	—	—	—	—	—
18	0.5	BK / GN	6281	II	—	Fuel Level Sensor Low Reference	18	0.5	BK / GN	6281	VI	—
19	—	—	—	—	—	Not Occupied	19	—	—	—	—	—
20	0.5	BK / BU	6282	II	—	Fuel Level Sensor 2 Low Reference	20	0.5	BK / BU	6282	VI	—
21	—	—	—	—	—	Not Occupied	21	—	—	—	—	—
22	0.5	BU / YE	6861	II	—	Water In Fuel Sensor Signal	22	0.5	BU / YE	6861	VI	—
23	0.5	WH / RD	6862	II	—	Water In Fuel Sensor Voltage Reference	23	0.5	WH / RD	6862	VI	—
24	0.5	BK / BU	6863	II	—	Water In Fuel Sensor Low Reference	24	0.5	BK / BU	6863	VI	—
25	—	—	—	—	—	Not Occupied	25	—	—	—	—	—

X351 Chassis Wiring Harness to Fuel Pump Power Control Module Wiring Harness (L5P +N2N) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
26	0.5	BN / RD	7445	II	—	Fuel Line Pressure Sensor 5V Reference	26	0.5	BN / RD	7445	VI	—
27	1	BU / GN	2120	I	—	Secondary Fuel Pump Control	27	1	BU / GN	2120	VIII	—
28	2.5	YE / GY	4137	I	—	Fuel Pump Supply Voltage Phase 2	28	2.5	YE / GY	4137	VIII	—
29	—	—	—	—	—	Not Occupied	29	—	—	—	—	—
30	2.5	WH / BN	4138	I	—	Fuel Pump Supply Voltage Phase 3	30	2.5	WH / BN	4138	VIII	—
31 - 42	—	—	—	—	—	Not Occupied	31 - 42	—	—	—	—	—
43	2.5	BK	1750	IV	—	Ground	43	2.5	BK	1750	VII	—
44	0.75	BU / WH	7446	II	—	Fuel Pressure Sensor Signal	44	0.75	BU / WH	7446	V	—
45	—	—	—	—	—	Not Occupied	45	—	—	—	—	—
46	0.5	BK / YE	7447	II	—	Fuel Pressure Sensor Low Reference	46	0.5	BK / YE	7447	VI	—
47	—	—	—	—	—	Not Occupied	47	—	—	—	—	—
48	0.5	VT / GN	4320	II	—	Powertrain Sensor Bus Enable	48	0.5	VT / GN	4320	VI	—
49	—	—	—	—	—	Not Occupied	49	—	—	—	—	—
50	0.5	BU / BN	4498	II	—	High Speed GMLAN Serial Data [+] 7	50	0.5	BU / BN	4498	VI	—
51	—	—	—	—	—	Not Occupied	51	—	—	—	—	—
52	0.5	WH	4499	II	—	High Speed GMLAN Serial Data [-] 7	52	0.5	WH	4499	VI	—
53	—	—	—	—	—	Not Occupied	53	—	—	—	—	—
54	1	BN	7444	III	—	Fuel Pump Assembly Shield Ground	54	0.75	BN	7444	V	—
55	—	—	—	—	—	Not Occupied	55	—	—	—	—	—

X370 Body Wiring Harness to Second Row Seat Heater Control Wiring Harness (KA6)



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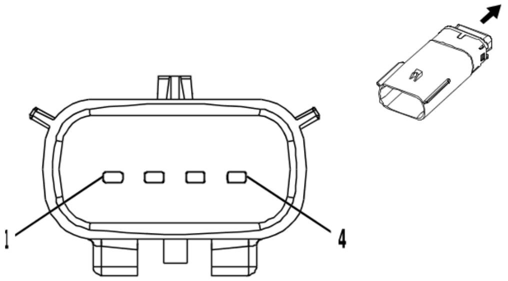

2917338

Connector Part Information

Harness Type: Body Wiring Harness

OEM Connector: 15514524

Service Connector: 19355605

Description: 4-Way F 1.5 OCS Series, Sealed(BK)

Connector Part Information

Harness Type: Second Row Seat Heater Control Wiring Harness

OEM Connector: 33481-4401

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way M 1.5 Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-3 (GY)	No Tool Required

X370 Body Wiring Harness to Second Row Seat Heater Control Wiring Harness (KA6)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	RD / YE	240	I	—	Battery Positive Voltage	1	0.75	RD / YE	240	II	—
2	0.5	RD / VT	340	I	—	Battery Positive Voltage	2	0.75	RD / VT	340	II	—
3	0.35	GN / BU	6133	I	—	Body Control Module LIN Bus 2	3	0.5	GN / BU	6133	II	—
4	1	BK	1150	I	—	Ground	4	1	BK	1150	II	—

X379 Headliner COAX Wiring Harness to Inside Rearview Mirror Jumper Wiring Harness (DRZ)

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Connector Part Information

Harness Type: Headliner COAX Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way F

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Connector Part Information

Harness Type: Inside Rearview Mirror Jumper Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 1-Way M

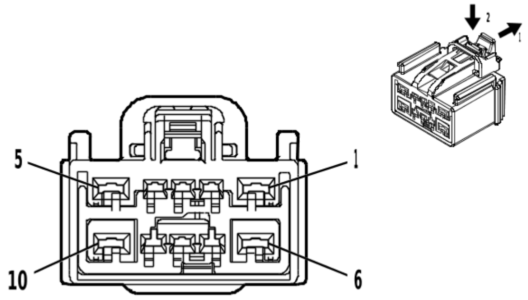
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
II	Not required	No Tool Required	No Tool Required

X379 Headliner COAX Wiring Harness to Inside Rearview Mirror Jumper Wiring Harness (DRZ)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
BU	—	—	Coax Cable	I	—	Coax Cable	BU	—	—	Coax Cable	II	—

X380 Inside Rearview Mirror Wiring Harness to Dome Lamp Wiring Harness (9L7+UVO)



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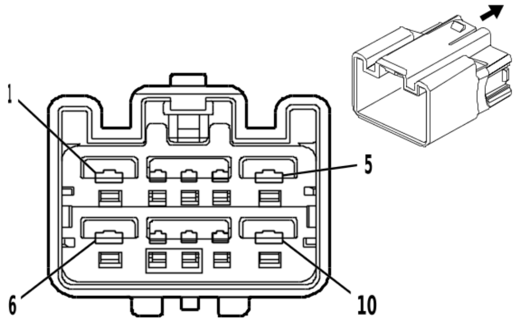

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Connector Part Information

Harness Type: Inside Rearview Mirror Wiring Harness
OEM Connector: 35061724
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way F 1.5, 2.8 Kaizen Series(L-GY)

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 13506926
Service Connector: Service by Harness - See Part Catalog
Description: 10-Way M Kaizen Series(L-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required
III	Not required	J-35616-3 (GY)	No Tool Required
IV	Not required	J-35616-5 (PU)	No Tool Required

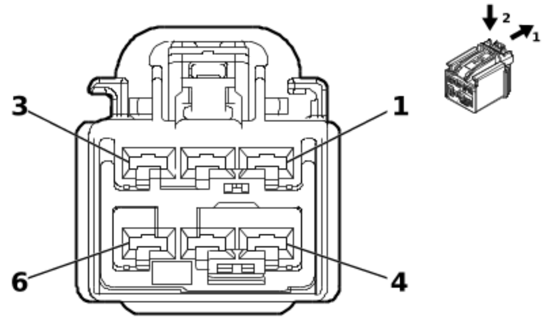
X380 Inside Rearview Mirror Wiring Harness to Dome Lamp Wiring Harness (9L7+UVO)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	GN / BU	5989	II	—	Emergency Vehicle Lamp Relay Control	1	2.5	GN / BU	5989	IV	—
2	0.35	VT / WH	5065	I	—	Stop Lamp Relay Coil Control	2	0.5	VT / WH	5065	III	—
3	0.35	BK	1050	I	—	Ground	3	0.35	BK	1050	III	—
4	0.35	WH / VT	1430	I	—	Exterior Courtesy Lamp Control	4	0.35	WH / VT	1430	III	—
5	2.5	BK	1050	II	—	Ground	5	2.5	BK	1050	IV	—
6	0.35	VT / GN	1739	II	—	Run/Crank Ignition 1 Voltage	6	0.35	VT / GN	1739	IV	—
7	0.35	WH / BU	6973	I	—	Rearview Camera Signal [-]	7	0.35	WH / BU	6973	III	—
8	0.35	GY / YE	6972	I	—	Rearview Camera Signal [+]	8	0.35	GY / YE	6972	III	—

X380 Inside Rearview Mirror Wiring Harness to Dome Lamp Wiring Harness (9L7+UVO) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
9	0.35	Bare	6974	I	—	Rearview Camera Low Reference	9	0.35	Bare	6974	III	—
10	0.35	BK / WH	1851	II	—	Signal Ground	10	0.35	BK / WH	1851	IV	—

X380 Inside Rearview Mirror Wiring Harness to Dome Lamp Wiring Harness (9L7-UVO)



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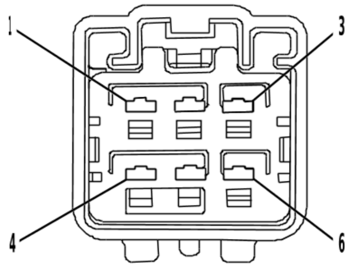

1849802

Connector Part Information

Harness Type: Inside Rearview Mirror Wiring Harness
OEM Connector: 35360831
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 2.8 YESC Series(GY)

Connector Part Information

Harness Type: Dome Lamp Wiring Harness
OEM Connector: 10847012
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way M Kaizen Series(L-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required
II	Not required	J-35616-5 (PU)	No Tool Required

X380 Inside Rearview Mirror Wiring Harness to Dome Lamp Wiring Harness (9L7-UVO)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	WH / VT	1430	I	—	Exterior Courtesy Lamp Control	1	0.35	WH / VT	1430	II	—
2	0.35	VT / WH	5065	I	—	Stop Lamp Relay Coil Control	2	0.5	VT / WH	5065	II	—
3	0.35	BK	1050	I	—	Ground	3	0.35	BK	1050	II	—
4	2.5	GN / BU	5989	I	—	Emergency Vehicle Lamp Relay Control	4	2.5	GN / BU	5989	II	—
5	2.5	BK	1050	I	—	Ground	5	2.5	BK	1050	II	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—

X381 Center High Mounted Stop Lamp Jumper Wiring Harness to Inside Rearview Mirror Jumper Wiring Harness (DRZ)

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Connector Part Information

Harness Type: Center High Mounted Stop Lamp Jumper Wiring Harness COAX

OEM Connector: Not Available

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way F

—

Connector Part Information

Harness Type: Inside Rearview Mirror Jumper Wiring Harness COAX

OEM Connector: Not Available

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way M

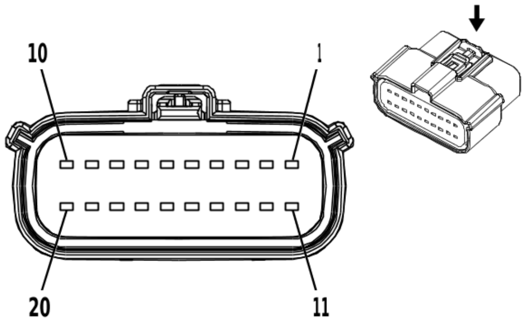
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X381 Center High Mounted Stop Lamp Jumper Wiring Harness to Inside Rearview Mirror Jumper Wiring Harness (DRZ)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	Coax Cable	—	I	—	Rear Vision Camera Coaxial Video Signal	—	—	Coax Cable	—	I	—

X401 Rear Bumper Wiring Harness to Chassis Wiring Harness



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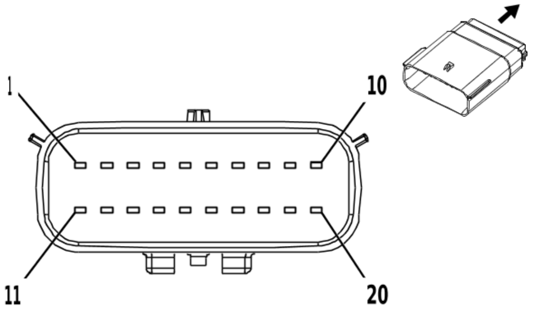


2871861

Connector Part Information

Harness Type: Rear Bumper Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 35189198
Service Connector: 19351705
Description: 20-Way M 1.5 MX Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
II	19331234	J-35616-14 (GN)	J-38125-557

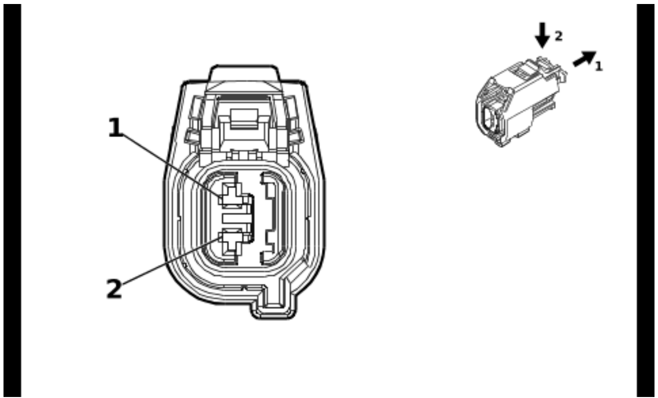
X401 Rear Bumper Wiring Harness to Chassis Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GN / YE	6846	I	—	Rear License Plate Lamp Control	1	0.5	GN / YE	6846	II	—
2 - 3	—	—	—	—	—	Not Occupied	2 - 3	—	—	—	—	—
4	0.75	BK / WH	1751	I	—	Signal Ground	4	0.75	BK / WH	1751	II	—
5	—	—	—	—	—	Not Occupied	5	—	—	—	—	—
6	1	BK	1450	I	—	Ground	6	1	BK	1450	II	—
7	0.5	GY / YE	1760	I	—	Left Side Object Detection LED Control	7	0.5	GY / YE	1760	II	—
8	0.5	GY	1761	I	—	Right Side Object Detection LED Control	8	0.5	GY	1761	II	—
9	0.5	BN / WH	2374	I	—	Object Sensor Voltage Reference	9	0.5	BN / WH	2374	II	—
10	0.5	YE	2375	I	—	Left Rear Outer Parking Assist Sensor Signal	10	0.5	YE	2375	II	—

X401 Rear Bumper Wiring Harness to Chassis Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
11	0.5	YE / BU	2376	I	—	Left Rear Middle Parking Assist Sensor Signal	11	0.5	YE / BU	2376	II	—
12	0.5	YE / WH	2377	I	—	Right Rear Middle Parking Assist Sensor Signal	12	0.5	YE / WH	2377	II	—
13	—	—	—	—	—	Not Occupied	13	—	—	—	—	—
14	0.5	RD / GN	1840	I	—	Battery Positive Voltage	14	0.5	RD / GN	1840	II	—
15	0.5	YE / VT	2378	I	—	Right Rear Outer Parking Assist Sensor Signal	15	0.5	YE / VT	2378	II	—
16	0.5	BK / GY	2379	I	—	Object Sensor Low Reference	16	0.5	BK / GY	2379	II	—
17	—	—	—	—	—	Not Occupied	17	—	—	—	—	—
18	0.5	GN	5060	I	—	Low Speed GMLAN Serial Data	18	0.5	GN	5060	II	—
19 - 20	—	—	—	—	—	Not Occupied	19 - 20	—	—	—	—	—

X406 Chassis Wiring Harness to Chassis Rear Wiring Harness Extension Harness



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Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33189092
Service Connector: 85526683
Description: 2-Way F 1.5 OCS Series, Sealed(GY)

Connector Part Information

Harness Type: Chassis Rear Wiring Harness Extension Harness
OEM Connector: 85564679
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way M Wheel Speed Sensor(GY)

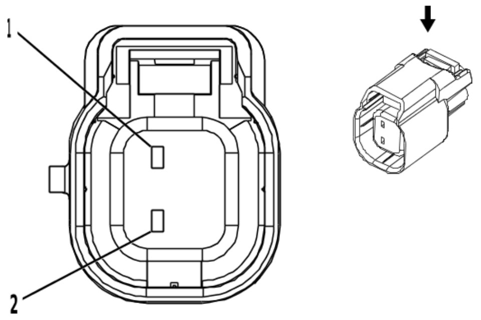
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	No Tool Required	No Tool Required

X406 Chassis Wiring Harness to Chassis Rear Wiring Harness Extension Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GY / BK	7127	I	—	Left Rear Wheel Speed Sensor Control	1	0.75	TN	7127	II	—
2	0.5	BU	884	I	—	Left Rear Wheel Speed Sensor Signal	2	0.75	OG	884	II	—

X407 Chassis Wiring Harness to Chassis Rear Wiring Harness Extension Harness



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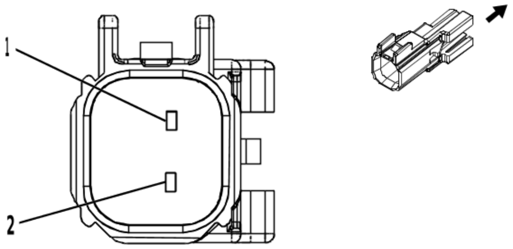


3271068

Connector Part Information

Harness Type: Chassis Wiring Harness

OEM Connector: 33122852

Service Connector: 19366860

Description: 2-Way F 1.5 Series, Sealed(BK)

Connector Part Information

Harness Type: Chassis Rear Wiring Harness Extension Harness

OEM Connector: 85564677

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M Wheel Speed Sensor(BK)

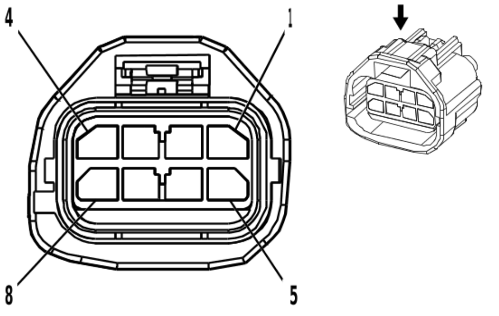
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-14 (GN)	No Tool Required
II	Not required	No Tool Required	No Tool Required

X407 Chassis Wiring Harness to Chassis Rear Wiring Harness Extension Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GY / YE	7128	I	—	Right Rear Wheel Speed Sensor Control	1	0.75	GN / YW	7128	II	—
2	0.5	VT	882	I	—	Right Rear Wheel Speed Sensor Signal	2	0.75	OG	882	II	—

X408 Running Board Jumper Wiring Harness - Left to Chassis Wiring Harness



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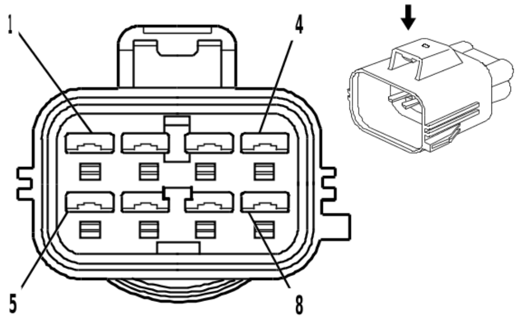


1856785

Connector Part Information

Harness Type: Running Board Jumper Wiring Harness - Left
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 15419459
Service Connector: 19367561
Description: 8-Way M 2.8 Series, Sealed(D-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
II	Not required	J-35616-5 (PU)	No Tool Required

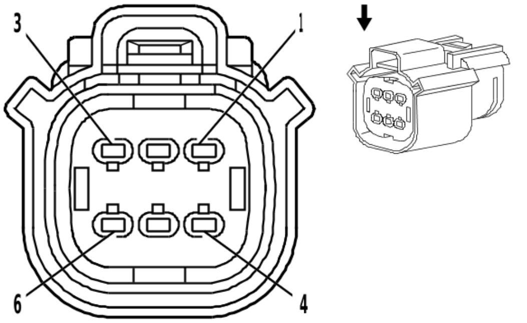
X408 Running Board Jumper Wiring Harness - Left to Chassis Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2	WH / BN	7471	I	—	Left Running Board Step Motor Control Extend	1	2	WH / BN	7471	II	—
2	0.5	VT / RD	7468	I	—	Left Running Board Step Motor Hall Sensor 5V Reference	2	0.5	VT / RD	7468	II	—
3	0.5	YE	7467	I	—	Left Running Board Step Motor Hall Sensor Signal	3	0.5	YE	7467	II	—
4	0.5	YE / BN	7466	I	—	Left Running Board Step Motor Hall Sensor Low Reference	4	0.5	YE / BN	7466	II	—
5	2	GY	7472	I	—	Left Running Board Step Motor Control Retract	5	2	GY	7472	II	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—

X408 Running Board Jumper Wiring Harness - Left to Chassis Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
7	0.5	GY / GN	5996	I	—	Driver Outside Rearview Mirror Courtesy Lamp Control	7	0.5	GY / GN	5996	II	—
8	0.5	BK	1750	I	—	Ground	8	0.5	BK	1750	II	—

X410 Tail Lamp Assembly Wiring Harness - Left to Chassis Wiring Harness



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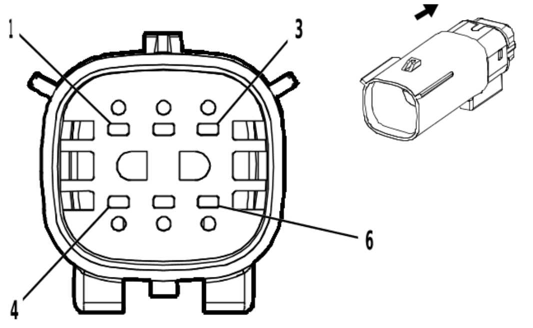


1986159

Connector Part Information

Harness Type: Tail Lamp Assembly Wiring Harness - Left
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 35014074
Service Connector: 19367742
Description: 6-Way M 1.5 MX Series, Sealed(BK)

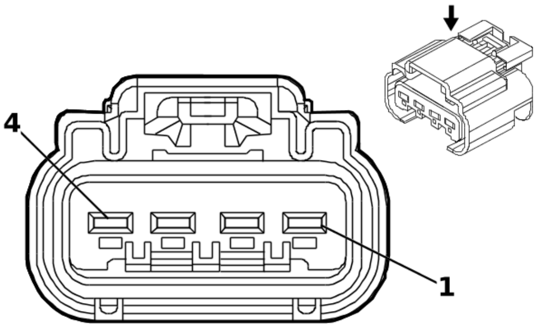
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
II	Not required	J-35616-3 (GY)	No Tool Required

X410 Tail Lamp Assembly Wiring Harness - Left to Chassis Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	VT / GY	709	I	—	Left Park Lamp Control	1	0.75	VT / GY	709	II	—
2	0.5	YE / BK	5356	I	—	Left Tail Lamp Outage Detection Signal	2	0.5	YE / BK	5356	II	—
3	0.5	GY / BU	7762	I	—	Cargo Lamp Control	3	0.5	GY / BU	7762	II	—
4	0.5	GN / WH	24	I	—	Backup Lamp Control	4	0.5	GN / WH	24	II	—
5	1	YE / BU	18	I	—	Left Rear Stop/Turn Signal Lamp Control	5	1	YE / BU	18	II	—
6	1	BK	1450	I	—	Ground	6	1	BK	1450	II	—

X411 Chassis Wiring Harness to Rear Fuel Tank Wiring Harness (L8T+N2N)



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5199377

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 13843236
Service Connector: 84769204
Description: 4-Way F 280 GT Series, Sealed(NA)

Connector Part Information

Harness Type: Rear Fuel Tank Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 4-Way M (NA)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required
II	Not required	No Tool Required	No Tool Required

X411 Chassis Wiring Harness to Rear Fuel Tank Wiring Harness (L8T+N2N)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	BU / GN	2120	I	—	Secondary Fuel Pump Control	1	2.5	BU / GN	2120	II	—
2	2.5	BK / GN	1580	I	—	Fuel Pump Low Reference	2	2.5	BK / GN	1580	II	—
3	0.5	BU / WH	1937	I	—	Secondary Fuel Level Sensor Signal	3	0.5	BU / WH	1937	II	—
4	0.5	BK / BU	6282	I	—	Fuel Level Sensor 2 Low Reference	4	0.5	BK / BU	6282	II	—

X412 Rear Fuel Tank Wiring Harness to Chassis Wiring Harness (L5P+N2N)

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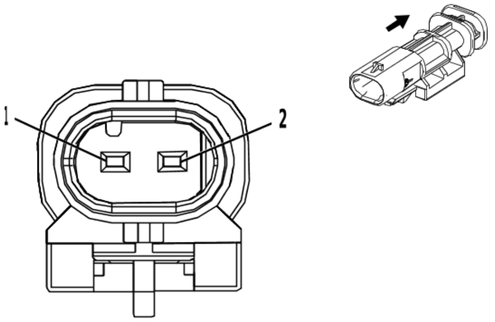


2474755

Connector Part Information

Harness Type: Rear Fuel Tank Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 2-Way F

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33207247
Service Connector: 85533165
Description: 2-Way M 1.2 MCON Series, Sealed(BK)

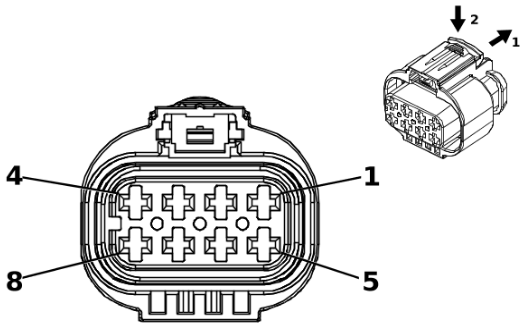
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
II	Not required	J-35616-13 (BU)	No Tool Required

X412 Rear Fuel Tank Wiring Harness to Chassis Wiring Harness (L5P+N2N)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	1	BU / GN	2120	I	—	Secondary Fuel Pump Control	1	1	BU / GN	2120	II	—
2	1	BK / GN	1580	I	—	Fuel Pump Low Reference	2	1	BK / GN	1580	II	—

X414 Chassis Wiring Harness to Rear Fuel Tank Wiring Harness (L5P+N2N)



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3749581

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 33180017
Service Connector: 19355165
Description: 8-Way F 2.8 Series, Sealed(BK)

Connector Part Information

Harness Type: Rear Fuel Tank Wiring Harness
OEM Connector: Not Available
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way M (BK)

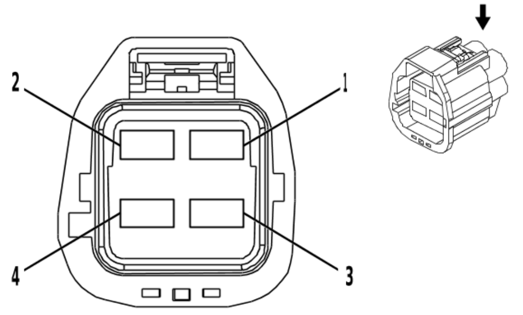
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-4A (PU)	No Tool Required
II	Not required	No Tool Required	No Tool Required

X414 Chassis Wiring Harness to Rear Fuel Tank Wiring Harness (L5P+N2N)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1 - 4	—	—	—	—	—	Not Occupied	1 - 4	—	—	—	—	—
5	0.5	BU / WH	1937	I	—	Secondary Fuel Level Sensor Signal	5	0.5	BU / WH	1937	II	—
6	0.5	BK / BU	6282	I	—	Fuel Level Sensor 2 Low Reference	6	0.5	BK / BU	6282	II	—
7 - 8	—	—	—	—	—	Not Occupied	7 - 8	—	—	—	—	—

X417 Chassis Rear Wiring Harness Extension Harness to Chassis Wiring Harness



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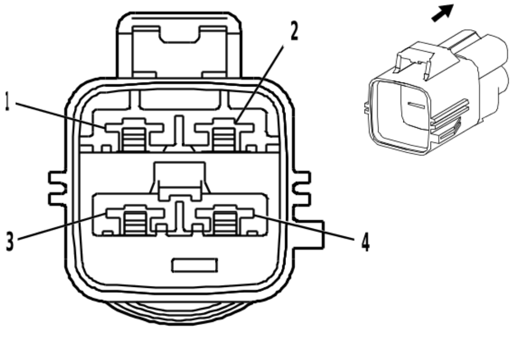


1853524

Connector Part Information

Harness Type: Chassis Rear Wiring Harness Extension Harness

OEM Connector: 7283-3601-10

Service Connector: Service by Harness - See Part Catalog

Description: 4-Way F 6.3 Series, Sealed(GY)

Connector Part Information

Harness Type: Chassis Wiring Harness

OEM Connector: 33360098

Service Connector: 19371198

Description: 4-Way M 6.3 Series, Sealed(GY)

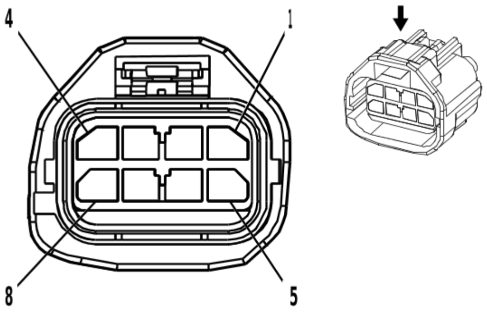
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-42 (RD)	No Tool Required
II	Not required	J-35616-43 (RD)	No Tool Required

X417 Chassis Rear Wiring Harness Extension Harness to Chassis Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	WH	2001	I	—	Left Park Brake Motor Apply Control	1	4	WH	2001	II	—
2	2.5	GN / BK	4369	I	—	Left Park Brake Motor Low Reference	2	4	GY / BK	4369	II	—
3	—	—	—	—	—	Right Park Brake Motor Apply Control	3	4	GN / VT	1988	II	—
4	—	—	—	—	—	Right Park Brake Motor Low Reference	4	4	GY	4368	II	—

X418 Running Board Jumper Wiring Harness - Right to Chassis Wiring Harness



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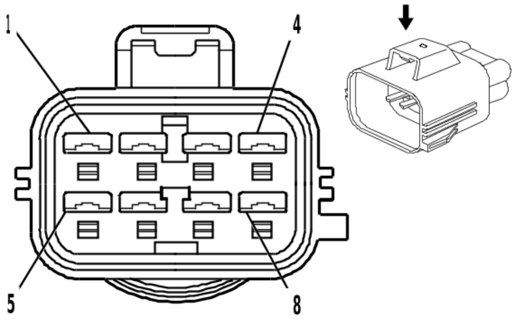


1856785

Connector Part Information

Harness Type: Running Board Jumper Wiring Harness - Right

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 8-Way F

Connector Part Information

Harness Type: Chassis Wiring Harness

OEM Connector: 15419459

Service Connector: 19367561

Description: 8-Way M 2.8 Series, Sealed(D-GY)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required
II	Not required	J-35616-5 (PU)	No Tool Required

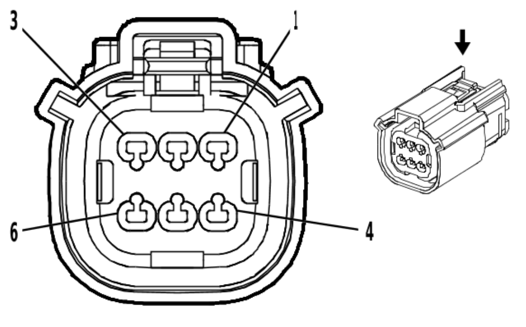
X418 Running Board Jumper Wiring Harness - Right to Chassis Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2	BU	7470	I	—	Right Running Board Step Motor Control Extend	1	2	BU	7470	II	—
2	0.5	GN / RD	7464	I	—	Right Running Board Step Motor Hall Sensor 5V Reference	2	0.5	GN / RD	7464	II	—
3	0.5	VT	7465	I	—	Right Running Board Step Motor Hall Sensor Signal	3	0.5	VT	7465	II	—
4	0.5	YE / BK	7463	I	—	Right Running Board Step Motor Hall Sensor Low Reference	4	0.5	YE / BK	7463	II	—
5	2	GN	7469	I	—	Right Left Running Board Step Motor Control Retract	5	2	GN	7469	II	—
6	—	—	—	—	—	Not Occupied	6	—	—	—	—	—

X418 Running Board Jumper Wiring Harness - Right to Chassis Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
7	0.5	GY / GN	5996	I	—	Driver Outside Rearview Mirror Courtesy Lamp Control	7	0.5	GY / GN	5996	II	—
8	0.5	BK	1750	I	—	Ground	8	0.5	BK	1750	II	—

X420 Tail Lamp Assembly Wiring Harness - Right to Chassis Wiring Harness



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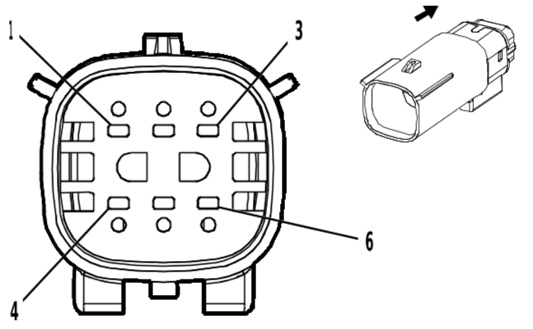


1986159

Connector Part Information

Harness Type: Tail Lamp Assembly Wiring Harness - Right
OEM Connector: 33472-0606
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 1.5 MX Series, Sealed(BK)

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 35014074
Service Connector: 19367742
Description: 6-Way M 1.5 MX Series, Sealed(BK)

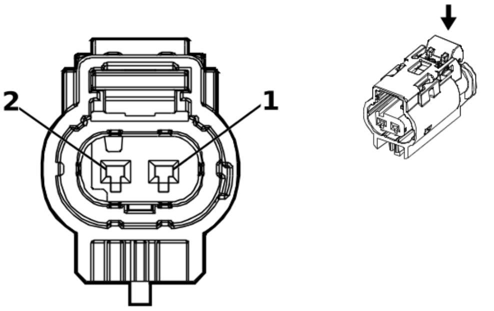
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-3 (GY)	No Tool Required

X420 Tail Lamp Assembly Wiring Harness - Right to Chassis Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	GY / BN	309	I	—	Right Park Lamp Control	1	0.75	GY / BN	309	II	—
2	0.5	VT / YE	5357	I	—	Right Tail Lamp Outage Detection Signal	2	0.5	VT / YE	5357	II	—
3	0.5	GY / BU	7762	I	—	Cargo Lamp Control	3	0.5	GY / BU	7762	II	—
4	0.5	GN / WH	24	I	—	Backup Lamp Control	4	0.5	GN / WH	24	II	—
5	1	BN / GN	19	I	—	Right Rear Stop/Turn Signal Lamp Control	5	1	BN / GN	19	II	—
6	0.75	BK	1750	I	—	Ground	6	0.75	BK	1750	II	—

X440 Chassis Rear Wiring Harness Extension Harness to Chassis Wiring Harness



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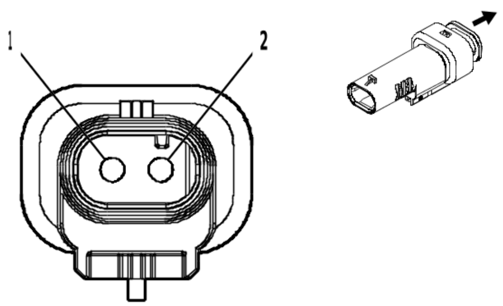


4992757

Connector Part Information

Harness Type: Chassis Rear Wiring Harness Extension Harness

OEM Connector: 10094237

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.2 Multilock Series, Sealed(GY)

Connector Part Information

Harness Type: Chassis Wiring Harness

OEM Connector: 33356666

Service Connector: 19371200

Description: 2-Way M 1.2 MLK Series, Sealed(GY)

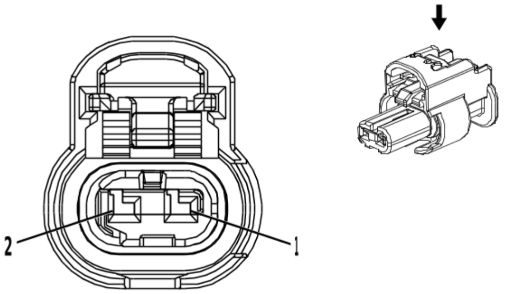
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	J-35616-13 (BU)	No Tool Required
III	Not required	J-35616-17 (L-GN)	No Tool Required

X440 Chassis Rear Wiring Harness Extension Harness to Chassis Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	GN / YE	1616	I	—	Rear Brake Pad Wear Sensor Signal	1	0.5	GN / YE	1616	III	—
2	0.75	BK / WH	1751	I	—	Signal Ground	2	0.75	BK / WH	1751	II	—

X450 Rear License Plate Lamp Wiring Harness Extension Harness to Tail Lamp Assembly Jumper Wiring Harness - Left



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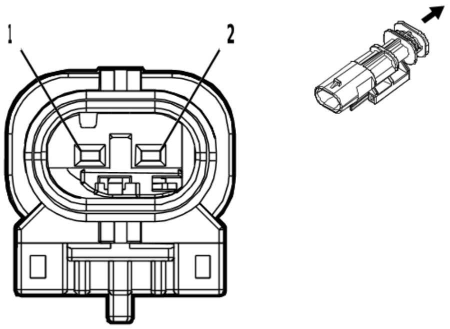


4569729

Connector Part Information

Harness Type: Rear License Plate Lamp Wiring Harness Extension Harness

OEM Connector: 33371691

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.2 MCON Series, Sealed(BK)

Connector Part Information

Harness Type: Tail Lamp Assembly Jumper Wiring Harness - Left

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M (BK)

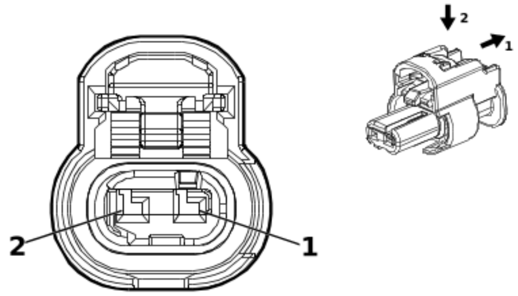
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required
II	Not required	No Tool Required	No Tool Required

X450 Rear License Plate Lamp Wiring Harness Extension Harness to Tail Lamp Assembly Jumper Wiring Harness - Left

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BK	1450	I	—	Ground	1	0.5	BK	1450	II	—
2	0.5	VT / GY	709	I	—	Left Park Lamp Control	2	0.5	VT / GY	709	II	—

X460 Rear License Plate Lamp Wiring Harness Extension Harness to Tail Lamp Assembly Jumper Wiring Harness - Right



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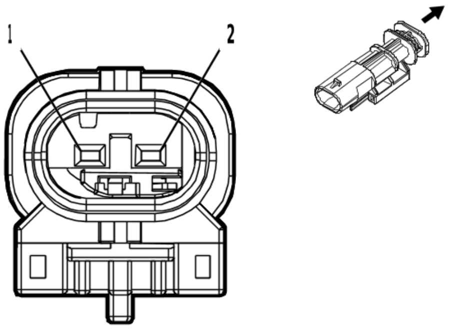


4569729

Connector Part Information

Harness Type: Rear License Plate Lamp Wiring Harness Extension Harness

OEM Connector: 33327048

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way F 1.2 MCON Series, Sealed(BK)

Connector Part Information

Harness Type: Tail Lamp Assembly Jumper Wiring Harness - Right

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 2-Way M (BK)

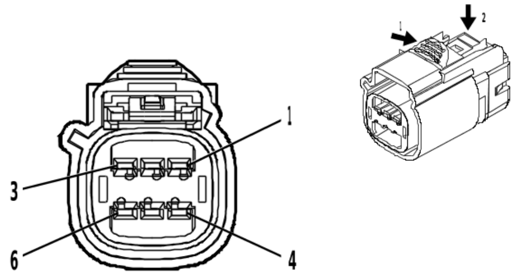
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-12 (BU)	No Tool Required
II	Not required	No Tool Required	No Tool Required

X460 Rear License Plate Lamp Wiring Harness Extension Harness to Tail Lamp Assembly Jumper Wiring Harness - Right

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GY / BN	309	I	—	Right Park Lamp Control	1	0.5	GY / BN	309	II	—
2	0.5	BK	1750	I	—	Ground	2	0.5	BK	1750	II	—

X470 Chassis Rear Wiring Harness to Chassis Wiring Harness



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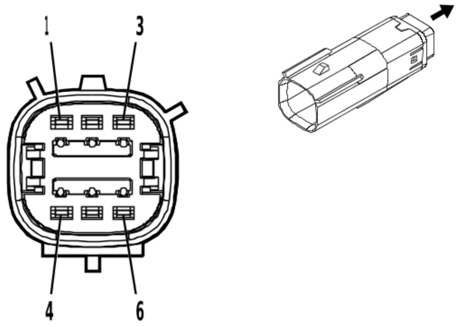


4992963

Connector Part Information

Harness Type: Chassis Rear Wiring Harness
OEM Connector: 15513505
Service Connector: Service by Harness - See Part Catalog
Description: 6-Way F 1.5 OCS Series, Sealed(GY)

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 15513475
Service Connector: 19371205
Description: 6-Way M 1.5 OCS Series, Sealed(GY)

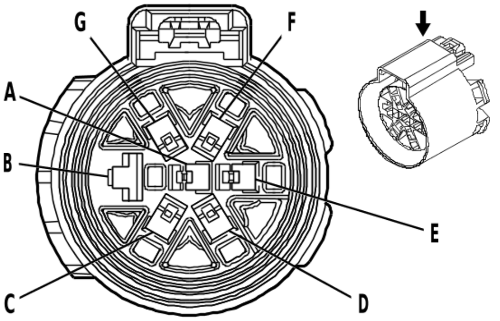
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-3 (GY)	No Tool Required

X470 Chassis Rear Wiring Harness to Chassis Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	BK / WH	2264	I	—	120V AC Phase A 2	1	0.75	BK / WH	2264	II	—
2	0.75	RD / WH	2265	I	—	120V AC Phase B 2	2	0.75	RD / WH	2265	II	—
3	0.5	GN	2257	I	—	Low Reference	3	0.5	BN	2257	II	—
4	0.75	GN / BN	2266	I	—	DC/AC Inverter Control 2	4	0.75	GN / BN	2266	II	—
5	0.5	BN	7754	I	—	AC Power Outlet Enable Signal	5	0.5	BN	7754	II	—
6	1	BK	6650	I	—	Ground	6	1	BK	6650	II	—

X480 Chassis Wiring Harness to Trailer Rear Wiring Harness (UY2/Z6A)



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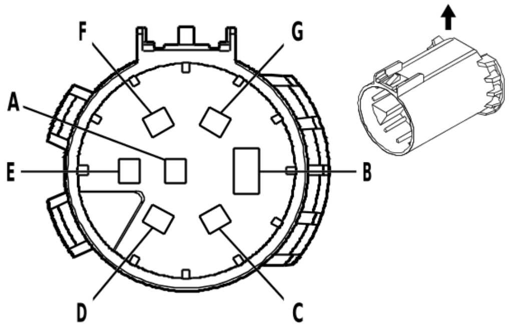


366087

Connector Part Information

Harness Type: Chassis Wiring Harness

OEM Connector: 13857223

Service Connector: 86816072

Description: 7-Way F 280, 630 Metri-Pack Series, Sealed(BK)

Connector Part Information

Harness Type: Trailer Rear Wiring Harness

OEM Connector: 15317327

Service Connector: Service by Harness - See Part Catalog

Description: 7-Way M 280 Metri-Pack Series, Sealed(BK)

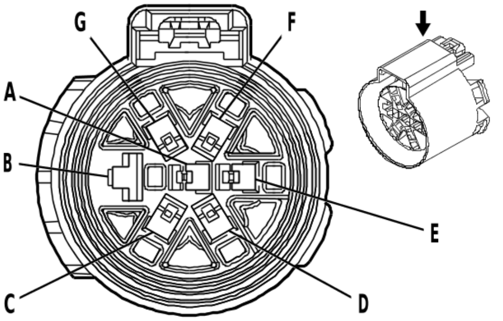
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-42 (RD)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required
III	Not required	J-35616-43 (RD)	No Tool Required
IV	Not required	J-35616-5 (PU)	No Tool Required

X480 Chassis Wiring Harness to Trailer Rear Wiring Harness (UY2/Z6A)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.75	WH / GN	1624	II	—	Trailer Back-up Lamp Control	A	0.75	WH / GN	1624	IV	—
B	5	WH	22	I	—	Trailer Ground	B	5	WH	22	III	—
C	4	BU	47	II	—	Trailer Auxiliary Control	C	4	BU	47	IV	—
D	0.75	GN / VT	1619	II	—	Right Rear Trailer Stop/ Turn Lamp Control	D	0.75	GN / VT	1619	IV	—
E	4	RD / GN	742	II	—	Battery Positive Voltage	E	4	RD / GN	742	IV	—
F	1.5	GY / BN	2109	II	—	Trailer Park Lamp Control	F	2	GY / BN	2109	IV	—
G	0.75	YE / BU	318	II	—	Left Rear Trailer Stop/ Turn Lamp Control	G	0.75	YE / BU	318	IV	—

X481 Trailer Rear Wiring Harness to Trailer Rear Wiring Harness (UY2/Z6A)



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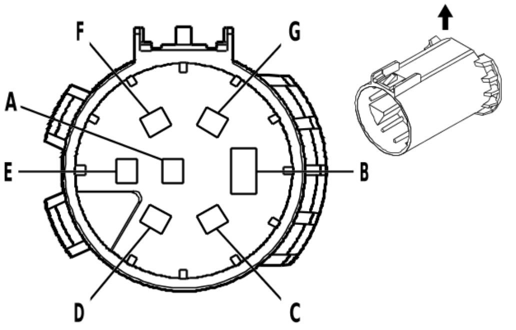


366087

Connector Part Information

Harness Type: Trailer Rear Wiring Harness

OEM Connector: 13857223

Service Connector: Service by Harness - See Part Catalog

Description: 7-Way F 280, 630 Metri-Pack Series, Sealed(BK)

Connector Part Information

Harness Type: Trailer Rear Wiring Harness

OEM Connector: 15317327

Service Connector: Service by Harness - See Part Catalog

Description: 7-Way M 280 Metri-Pack Series, Sealed(BK)

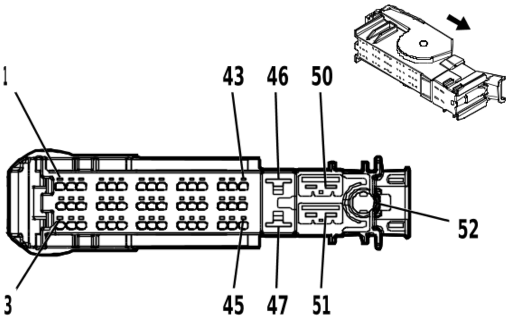
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-42 (RD)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required
III	Not required	J-35616-43 (RD)	No Tool Required
IV	Not required	J-35616-5 (PU)	No Tool Required

X481 Trailer Rear Wiring Harness to Trailer Rear Wiring Harness (UY2/Z6A)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
A	0.75	WH / GN	1624	II	—	Trailer Back-up Lamp Control	A	0.75	WH / GN	1624	IV	—
B	5	WH	22	I	—	Trailer Ground	B	5	WH	22	III	—
C	4	BU	47	II	—	Trailer Auxiliary Control	C	4	BU	47	IV	—
D	0.75	GN / VT	1619	II	—	Right Rear Trailer Stop/ Turn Lamp Control	D	0.75	GN / VT	1619	IV	—
E	4	RD / GN	742	II	—	Battery Positive Voltage	E	4	RD / GN	742	IV	—
F	1.5	GY / BN	2109	II	—	Trailer Park Lamp Control	F	2	GY / BN	2109	IV	—
G	0.75	YE / BU	318	II	—	Left Rear Trailer Stop/ Turn Lamp Control	G	0.75	YE / BU	318	IV	—

X500 Driver Door Wiring Harness to Body Wiring Harness



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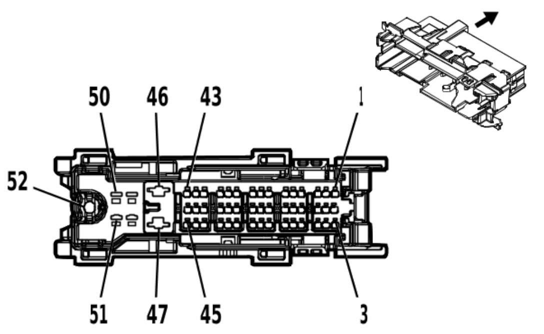


4993484

Connector Part Information

Harness Type: Driver Door Wiring Harness
OEM Connector: 35077349
Service Connector: Service by Harness - See Part Catalog
Description: 52-Way F 1.2, 2.8, 6.3, Coaxial Series(BK)

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35190453
Service Connector: 13527236
Description: 52-Way M 1.2, 2.8, 6.3, Coaxial Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	J-35616-42 (RD)	No Tool Required
III	Not required	J-35616-4A (PU)	No Tool Required
IV	Not required	No Tool Required	No Tool Required
V	19301536	J-35616-43 (RD)	J-38125-11A
VI	84616651	J-35616-13 (BU)	J-38125-215A
VII	84888592	J-35616-5 (PU)	J-38125-11A
VIII	Service by Cable	No Tool Required	J-38125-12A

X500 Driver Door Wiring Harness to Body Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Not Occupied	1	—	—	—	—	—
2	0.5	GY / YE	1760	I	—	Left Side Object Detection LED Control	2	0.35	GY / YE	1760	VI	—
3	—	—	—	—	—	Not Occupied	3	—	—	—	—	—
4	0.5	WH / VT	968	I	—	Auxiliary 4 Control	4	0.35	WH / VT	968	VI	—
5	—	—	—	—	—	Not Occupied	5	—	—	—	—	—
6	0.5	YE / VT	3397	I	—	Passenger Outside Rearview Mirror Motor Up [+] Down [-] Control	6	0.5	YE / VT	3397	VI	—

X500 Driver Door Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
7	0.5	WH	3398	I	—	Passenger Outside Rearview Mirror Motor Common Control	7	0.5	WH	3398	VI	—
8	0.5	GN / BK	3396	I	—	Passenger Outside Rearview Mirror Motor Right [+] Left [-] Control	8	0.5	GN / BK	3396	VI	—
9	0.5	BU	2082	I	—	Puddle Lamp Control	9	0.35	BU	2082	VI	—
10	0.5	BK / BU	5978	I	—	Memory Switch Low Reference	10	0.35	BK / BU	5978	VI	—
11	0.75	WH / BN	3410	I	—	Mirror Outside Rearview Mirror Fold Control	11	0.5	WH / BN	3410	VI	—
12	0.5	WH	615	I	—	Seat Memory Switch Signal 1	12	0.35	WH	615	VI	—
13	0.5	BN / WH	781	I	—	Driver Door Lock Switch Unlock Signal	13	0.35	BN / WH	781	VI	—
14	0.5	BN / YE	2267	I	—	Outside Rearview Mirror Heater Control	14	0.5	BN / YE	2267	VI	—
15	0.75	VT / YE	3409	I	—	Outside Rearview Mirror Motor Unfold Control	15	0.5	VT / YE	3409	VI	—
16	0.5	BU / GN	614	I	—	Seat Memory Switch Set Signal	16	0.35	BU / GN	614	VI	—
17 - 18	—	—	—	—	—	Not Occupied	17 - 18	—	—	—	—	—
19	0.35	WH / YE	7557	I	—	Interior Door Handle Accent Lighting Control	19	0.35	WH / YE	7557	VI	—
20	0.5	GN / WH	3570	I	—	Driver Door Handle Switch Signal	20	0.35	GN / WH	3570	VI	—
21	0.5	WH / YE	3574	I	—	Driver Door Open Switch Signal	21	0.35	WH / YE	3574	VI	—
22	0.5	BU / WH	1314	I	—	Left Front Turn Signal Lamp Control	22	0.35	BU / WH	1314	VI	—
23	0.5	PK	745	I	—	Left Front Door Ajar Switch Signal	23	0.35	PK	745	VI	—

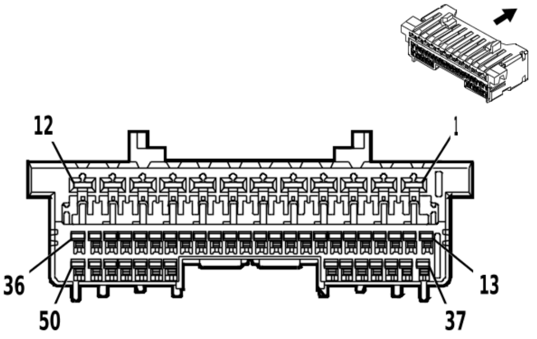
X500 Driver Door Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
24	—	—	—	—	—	Not Occupied	24	—	—	—	—	—
25	0.75	OG / GN	2132	I	—	Left Front Side Impact Sensor Signal	25	0.35	OG / GN	2132	VI	—
26	0.5	YE / WH	1690	I	—	Mirror Dimming Signal	26	0.35	YE / WH	1690	VI	—
27	0.5	GY / GN	5996	I	—	Driver Outside Rearview Mirror Courtesy Lamp Control	27	0.35	GY / GN	5996	VI	—
28	0.75	BK / OG	6628	I	—	Left Front Side Impact Sensor Low Reference	28	0.35	BK / OG	6628	VI	—
29	0.35	BN / YE	780	I	—	Driver Door Lock Switch Lock Signal	29	0.35	BN / YE	780	VI	—
30	0.5	RD / VT	1940	I	—	Battery Positive Voltage	30	0.35	RD / VT	1940	VI	—
31	0.5	VT / GY	3561	I	—	Driver Door Passive Entry Antenna Low Signal	31	0.5	VT / GY	3561	VI	—
32	0.5	VT	3560	I	—	Driver Door Passive Entry Antenna High Signal	32	0.5	VT	3560	VI	—
33	0.5	BU / VT	1124	I	—	Door Lock Key Switch Unlock Signal	33	0.35	BU / VT	1124	VI	—
34	—	—	—	—	—	Not Occupied	34	—	—	—	—	—
35	0.5	GN / YE	6134	I	—	Body Control Module LIN Bus 3	35	0.35	GN / YE	6134	VI	—
36 - 41	—	—	—	—	—	Not Occupied	36 - 41	—	—	—	—	—
42	0.5	VT / GY	709	I	—	Left Park Lamp Control	42	0.5	VT / GY	709	VI	—
43	0.5	YE	6817	I	—	LED Backlight Dimming Control 1	43	0.35	YE	6817	VI	—
44	0.5	GN / WH	7530	I	—	Driver Seat Adjuster Memory Module LIN Bus 1	44	0.35	GN / WH	7530	VI	—
45	0.5	BK / YE	1691	I	—	Automatic Day/Night Mirror Low Reference	45	0.35	BK / YE	1691	VI	—
46	0.75 3	BK BK	1150 1150	II II	ATH KA6/ QT5/ A48	Ground Ground	46	3	BK	1150	V	—

X500 Driver Door Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
47	2.5	RD / BU	1842	II	—	Battery Positive Voltage	47	2.5	RD / BU	1842	V	—
48	0.75	BN / YE	294	III	—	Door Lock Actuator Unlock Control	48	0.75	BN / YE	294	VII	—
49	0.75	GY	5911	III	—	Door Lock Actuator Lock Control 2	49	0.75	GY	5911	VII	—
50	0.75	BN / BU	118	III	—	Left Front Speaker [-] Control 1	50	0.75	BN / BU	118	VII	—
51	0.75	BU	201	III	—	Left Front Speaker 1 [+] Control	51	0.75	BU	201	VII	—
52	0	BK	2628	IV	—	Left Sideview Camera Video Signal [+]	52	0	—	2628	VIII	—

X505 Driver Door Wiring Harness to Driver Door Trim Wiring Harness



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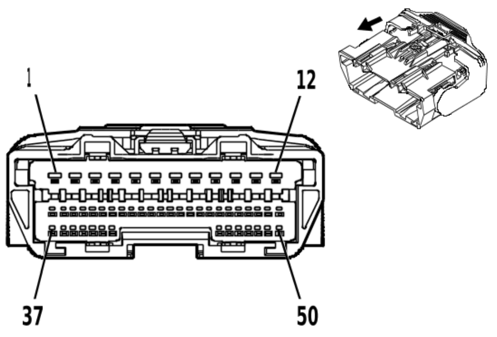


5022037

Connector Part Information

Harness Type: Driver Door Wiring Harness
OEM Connector: 35283943
Service Connector: Service by Harness - See Part Catalog
Description: 50-Way F 1.2, 2.8 OCS Series(BK)

Connector Part Information

Harness Type: Driver Door Trim Wiring Harness
OEM Connector: 33390111
Service Connector: Service by Harness - See Part Catalog
Description: 50-Way M 1.2, 2.8 OCS Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required
III	Not required	J-35616-13 (BU)	No Tool Required
IV	Not required	J-35616-17 (L-GN)	No Tool Required
V	Not required	J-35616-5 (PU)	No Tool Required

X505 Driver Door Wiring Harness to Driver Door Trim Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	YE / GY	190	II	—	Left Outside Rearview Mirror Folding Motor Unfold Control	1	0.35	YE / GY	190	V	—
2	0.35	BU / VT	191	II	—	Left Outside Rearview Mirror Folding Motor Fold Control	2	0.35	BU / VT	191	V	—
3	0.75	VT / YE	3409	II	—	Outside Rearview Mirror Motor Unfold Control	3	0.35	VT / YE	3409	V	—
4	0.75	WH / BN	3410	II	—	Mirror Outside Rearview Mirror Fold Control	4	0.35	WH / BN	3410	V	—
5 - 12	—	—	—	—	—	Not Occupied	5 - 12	—	—	—	—	—

X505 Driver Door Wiring Harness to Driver Door Trim Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
13	0.5	GN / WH	7530	I	—	Driver Seat Adjuster Memory Module LIN Bus 1	13	0.5	GN / WH	7530	IV	—
14	0.35	BK / BN	3393	I	—	Driver Outside Rearview Mirror Position Sensor Low Reference	14	0.35	BK / BN	3393	III	—
15	0.5	BU / VT	1124	I	—	Door Lock Key Switch Unlock Signal	15	0.35	BU / VT	1124	III	—
16	0.35	GN / WH	3379	I	—	Window Switch Driver Up Signal	16	0.5	GN / WH	3379	IV	—
17	0.5	RD / VT	1940	I	—	Battery Positive Voltage	17	0.35	RD / VT	1940	III	—
18	0.35	GN	3381	I	—	Window Switch Driver Express Signal	18	0.35	GN	3381	III	—
19	0.5	WH	3398	I	—	Passenger Outside Rearview Mirror Motor Common Control	19	0.35	WH	3398	III	—
20	0.35	WH / YE	7557	I	—	Interior Door Handle Accent Lighting Control	20	0.35	WH / YE	7557	III	—
21	0.5	BN / BK	3389	I	—	Driver Outside Rearview Mirror Motor Right [+] Left [-] Control	21	0.35	BN / BK	3389	III	—
22	0.35	WH / YE	3395	I	—	Driver Outside Rearview Mirror Position Sensor Left [-] Right [+] Signal	22	0.35	WH / YE	3395	III	—
23	—	—	—	—	—	Not Occupied	23	—	—	—	—	—
24	0.35	WH / GN	3412	I	—	Driver Outside Rearview Mirror Motor Fold Control	24	0.35	WH / GN	3412	III	—
25	0.35	WH / VT	3270	I	—	Driver Door Lock Motor Status Signal	25	0.35	WH / VT	3270	III	—

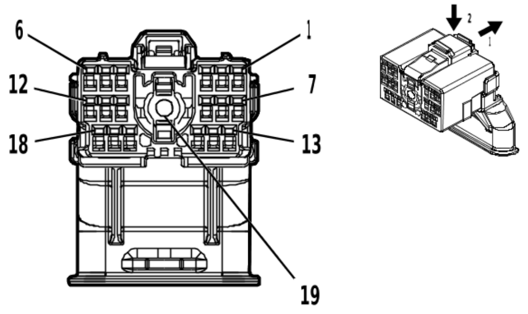
X505 Driver Door Wiring Harness to Driver Door Trim Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
26	0.35	GY / BN	3394	I	—	Driver Outside Rearview Mirror Position Sensor Up [+] Down [-] Signal	26	0.35	GY / BN	3394	III	—
27	0.5	GN / YE	6134	I	—	Body Control Module LIN Bus 3	27	0.5	GN / YE	6134	IV	—
28	0.35	YE / BN	3391	I	—	Driver Mirror Motor Common Control	28	0.35	YE / BN	3391	III	—
29	—	—	—	—	—	Not Occupied	29	—	—	—	—	—
30	0.75	BK	1150	I	—	Ground	30	0.5	BK	1150	IV	—
31	0.35	GY / WH	3411	I	—	Driver Outside Rearview Mirror Motor Unfold Control	31	0.35	GY / WH	3411	III	—
32	—	—	—	—	—	Not Occupied	32	—	—	—	—	—
33	0.35	VT / BU	3390	I	—	Driver Outside Rearview Mirror Motor Up [+] Down [-] Control	33	0.35	VT / BU	3390	III	—
34	0.5	WH	615	I	—	Seat Memory Switch Signal 1	34	0.35	WH	615	III	—
35	—	—	—	—	—	Not Occupied	35	—	—	—	—	—
36	0.5	YE	6817	I	—	LED Backlight Dimming Control 1 LED Backlight Dimming Control 1	36	0.35	YE	6817	III	—
37	—	—	—	—	—	Not Occupied	37	—	—	—	—	—
38	0.35	VT / RD	3392	I	—	Driver Outside Rearview Mirror Position Sensor 5V Reference	38	0.35	VT / RD	3392	III	—
39	0.5	BN / WH	781	I	—	Driver Door Lock Switch Unlock Signal	39	0.35	BN / WH	781	III	—
40	0.5	GN / BK	3396	I	—	Passenger Outside Rearview Mirror Motor Right [+] Left [-] Control	40	0.35	GN / BK	3396	III	—

X505 Driver Door Wiring Harness to Driver Door Trim Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
41	0.5	YE / VT	3397	I	—	Passenger Outside Rearview Mirror Motor Up [+] Down [-] Control	41	0.35	YE / VT	3397	III	—
42	0.5	GY	3380	I	—	Driver Window Main Control Down Switch Signal	42	0.5	GY	3380	IV	—
43	0.5	BU / GN	614	I	—	Seat Memory Switch Set Signal	43	0.35	BU / GN	614	III	—
44	—	—	—	—	—	Not Occupied	44	—	—	—	—	—
45	0.5	BK / BU	5978	I	—	Memory Switch Low Reference	45	0.35	BK / BU	5978	III	—
46	—	—	—	—	—	Not Occupied	46	—	—	—	—	—
47	0.35	BN / YE	780	I	—	Driver Door Lock Switch Lock Signal	47	0.5	BN / YE	780	IV	—
48 - 50	—	—	—	—	—	Not Occupied	48 - 50	—	—	—	—	—

X510 Driver Door Wiring Harness to Outside Rearview Mirror Wiring Harness - Driver Door



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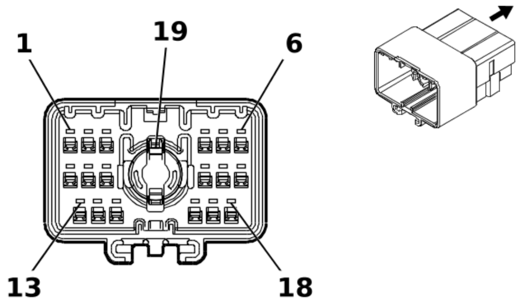


4969165

Connector Part Information

Harness Type: Driver Door Wiring Harness

OEM Connector: 35077331

Service Connector: Service by Harness - See Part Catalog

Description: 19-Way F 1.2 MCON, Coaxial Series(BK)

Connector Part Information

Harness Type: Outside Rearview Mirror Wiring Harness - Driver Door

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 19-Way M (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	No Tool Required	No Tool Required
III	Not required	No Tool Required	No Tool Required

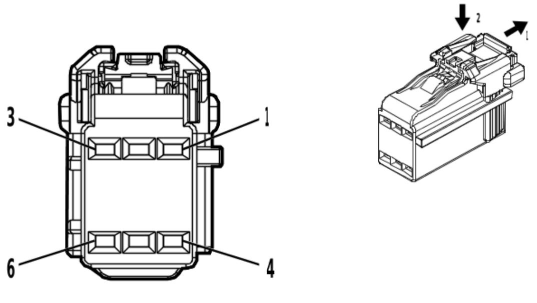
X510 Driver Door Wiring Harness to Outside Rearview Mirror Wiring Harness - Driver Door

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	BN / BK	3389	I	—	Driver Outside Rearview Mirror Motor Right [+] Left [-] Control	1	0.5	BN / BK	3389	III	—
2	0.35	VT / BU	3390	I	—	Driver Outside Rearview Mirror Motor Up [+] Down [-] Control	2	0.35	VT / BU	3390	III	—
3	0.35 0.75	WH / GN WH / BN	3412 3410	I I	A45/ DZC DWI	Driver Outside Rearview Mirror Motor Fold Control Mirror Outside Rearview Mirror Fold Control	3	0.75	WH / BN	3410	III	—
4	0.5	GY / YE	1760	I	—	Left Side Object Detection LED Control	4	0.5	GY / YE	1760	III	—

X510 Driver Door Wiring Harness to Outside Rearview Mirror Wiring Harness - Driver Door (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
5	0.5	GY / GN	5996	I	—	Driver Outside Rearview Mirror Courtesy Lamp Control	5	0.5	GY / GN	5996	III	—
6	0.5	VT / GY	709	I	—	Left Park Lamp Control	6	0.5	VT / GY	709	III	—
7	0.5	BN / YE	2267	I	—	Outside Rearview Mirror Heater Control	7	0.5	BN / YE	2267	III	—
8	0.5	BU / WH	1314	I	—	Left Front Turn Signal Lamp Control	8	0.5	BU / WH	1314	III	—
9	0.75	BK	1150	I	—	Ground	9	0.75	BK	1150	III	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—
11	0.5	BU	2082	I	—	Puddle Lamp Control	11	0.5	BU	2082	III	—
12	0.5	BK / YE	1691	I	—	Automatic Day/Night Mirror Low Reference	12	0.5	BK / YE	1691	III	—
13	0.5	WH / VT	968	I	—	Auxiliary 4 Control	13	0.5	WH / VT	968	III	—
14	0.35	YE / BN	3391	I	—	Driver Mirror Motor Common Control	14	0.35	YE / BN	3391	III	—
15	0.35 0.75	GY / WH VT / YE	3411 3409	I I	A45/ DZC DWI	Driver Outside Rearview Mirror Motor Unfold Control Outside Rearview Mirror Motor Unfold Control	15	0.75	VT / YE	3409	III	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.5	YE / WH	1690	I	—	Mirror Dimming Signal	17	0.5	YE / WH	1690	III	—
18	—	—	—	—	—	Not Occupied	18	—	—	—	—	—
19	0	BK	2628	II	—	Left Sideview Camera Video Signal [+]	19	0	BK	2628	III	—

X511 Driver Door Wiring Harness to Outside Rearview Mirror Wiring Harness - Driver Door



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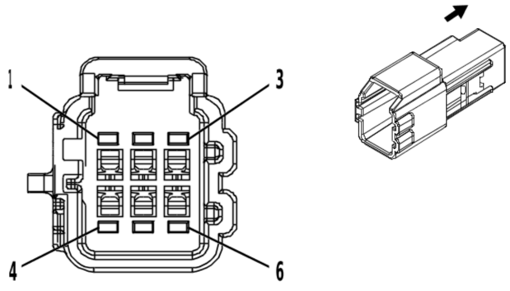


4446774

Connector Part Information

Harness Type: Driver Door Wiring Harness

OEM Connector: 35327305

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 1.2 Series(BK)

Connector Part Information

Harness Type: Outside Rearview Mirror Wiring Harness - Driver Door

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way M (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	No Tool Required	No Tool Required

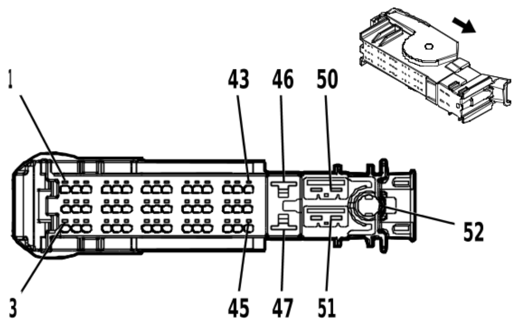
X511 Driver Door Wiring Harness to Outside Rearview Mirror Wiring Harness - Driver Door

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.35	WH / YE	3395	I	—	Driver Outside Rearview Mirror Position Sensor Left [-] Right [+] Signal	1	0.35	WH / YE	3395	II	—
2	0.35	VT / RD	3392	I	—	Driver Outside Rearview Mirror Position Sensor 5V Reference	2	0.35	VT / RD	3392	II	—
3	0.35	GY / BN	3394	I	—	Driver Outside Rearview Mirror Position Sensor Up [+] Down [-] Signal	3	0.35	GY / BN	3394	II	—
4	0.35	BK / BN	3393	I	—	Driver Outside Rearview Mirror Position Sensor Low Reference	4	0.35	BK / BN	3393	II	—

X511 Driver Door Wiring Harness to Outside Rearview Mirror Wiring Harness - Driver Door (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
5	0.75	YE / GY	190	I	—	Left Outside Rearview Mirror Folding Motor Unfold Control	5	0.75	YE / GY	190	II	—
6	0.35	BU / VT	191	I	—	Left Outside Rearview Mirror Folding Motor Fold Control	6	0.35	BU / VT	191	II	—

X600 Passenger Door Wiring Harness to Body Wiring Harness



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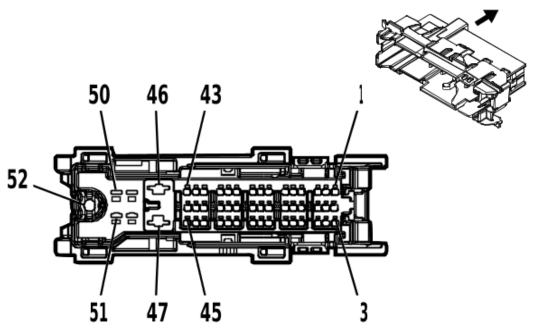


4993484

Connector Part Information

Harness Type: Passenger Door Wiring Harness
OEM Connector: 35077349
Service Connector: Service by Harness - See Part Catalog
Description: 52-Way F 1.2, 2.8, 6.3, Coaxial Series(BK)

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35190453
Service Connector: 13527236
Description: 52-Way M 1.2, 2.8, 6.3, Coaxial Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	J-35616-42 (RD)	No Tool Required
III	Not required	J-35616-4A (PU)	No Tool Required
IV	Not required	No Tool Required	No Tool Required
V	19301536	J-35616-43 (RD)	J-38125-11A
VI	84616651	J-35616-13 (BU)	J-38125-215A
VII	84888592	J-35616-5 (PU)	J-38125-11A
VIII	Service by Cable	No Tool Required	J-38125-12A

X600 Passenger Door Wiring Harness to Body Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1 - 3	—	—	—	—	—	Not Occupied	1 - 3	—	—	—	—	—
4	0.5	WH / VT	968	I	—	Auxiliary 4 Control	4	0.35	WH / VT	968	VI	—
5	0.5	GY	746	I	—	Right Front Door Ajar Switch Signal	5	0.35	GY	746	VI	—
6	0.5	YE / VT	3397	I	—	Passenger Outside Rearview Mirror Motor Up [+] Down [-] Control	6	0.5	YE / VT	3397	VI	—
7	0.5	WH	3398	I	—	Passenger Outside Rearview Mirror Motor Common Control	7	0.5	WH	3398	VI	—

X600 Passenger Door Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
8	0.5	GN / BK	3396	I	—	Passenger Outside Rearview Mirror Motor Right [+] Left [-] Control	8	0.5	GN / BK	3396	VI	—
9	0.5	BU	2082	I	—	Puddle Lamp Control	9	0.35	BU	2082	VI	—
10	—	—	—	—	—	Not Occupied	10	—	—	—	—	—
11	0.5	WH / BN	3410	I	—	Mirror Outside Rearview Mirror Fold Control	11	0.5	WH / BN	3410	VI	—
12	—	—	—	—	—	Not Occupied	12	—	—	—	—	—
13	0.5	BN / VT	245	I	—	Passenger Door Lock Switch Unlock Control	13	0.35	BN / VT	245	VI	—
14	—	—	—	—	—	Not Occupied	14	—	—	—	—	—
15	0.5	VT / YE	3409	I	—	Outside Rearview Mirror Motor Unfold Control	15	0.5	VT / YE	3409	VI	—
16 - 18	—	—	—	—	—	Not Occupied	16 - 18	—	—	—	—	—
19	0.35	WH / YE	7557	I	—	Interior Door Handle Accent Lighting Control	19	0.35	WH / YE	7557	VI	—
20	0.5	VT / WH	3571	I	—	Passenger Door Handle Switch Signal	20	0.35	VT / WH	3571	VI	—
21	0.5	GY	1761	I	—	Right Side Object Detection LED Control	21	0.35	GY	1761	VI	—
22	0.5	GN / VT	1315	I	—	Right Front Turn Signal Lamp Control	22	0.35	GN / VT	1315	VI	—
23	—	—	—	—	—	Not Occupied	23	—	—	—	—	—
24	0.35	BK	1250	I	—	Ground	24	0.5	BK	1150	VI	—
25	0.75	BN / OG	2134	I	—	Right Front Side Impact Sensor Signal	25	0.35	BN / OG	2134	VI	—
26	0.5	YE / WH	1690	I	—	Mirror Dimming Signal	26	0.35	YE / WH	1690	VI	—
27	0.5	GY / GN	5996	I	—	Driver Outside Rearview Mirror Courtesy Lamp Control	27	0.35	GY / GN	5996	VI	—

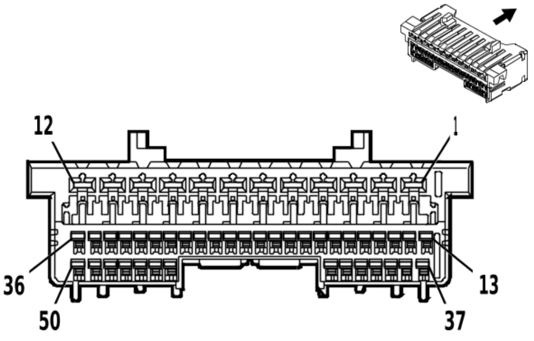
X600 Passenger Door Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
28	0.75	BK / OG	6629	I	—	Right Front Side Impact Sensor Low Reference	28	0.35	BK / OG	6629	VI	—
29	0.5	YE / VT	244	I	—	Passenger Door Lock Switch Lock Control	29	0.35	YE / VT	244	VI	—
30	—	—	—	—	—	Not Occupied	30	—	—	—	—	—
31	0.5	GN / BK	3563	I	—	Passenger Door Passive Entry Antenna Low Signal	31	0.5	GN / BK	3563	VI	—
32	0.5	GN / YE	3562	I	—	Passenger Door Passive Entry Antenna High Signal	32	0.5	GN / YE	3562	VI	—
33	—	—	—	—	—	Not Occupied	33	—	—	—	—	—
34	0.35	BK / GN	580	I	—	Engine Control Sensors Low Reference 2	34	0.35	BK / GN	580	VI	—
35	0.35	GN / YE	6134	I	—	Body Control Module LIN Bus 3	35	0.35	GN / YE	6134	VI	—
36	0.35	BU / GY	636	I	—	Ambient Air Temperature Sensor Signal	36	0.35	BU / GY	636	VI	—
37	—	—	—	—	—	Not Occupied	37	—	—	—	—	—
38	0.5	BN / YE	2267	I	—	Outside Rearview Mirror Heater Control	38	0.5	BN / YE	2267	VI	—
39	0.5	GY / BN	309	I	—	Right Park Lamp Control	39	0.5	GY / BN	309	VI	—
40 - 42	—	—	—	—	—	Not Occupied	40 - 42	—	—	—	—	—
43	0.5	YE	6817	I	—	LED Backlight Dimming Control 1	43	0.35	YE	6817	VI	—
44	0.5	GN / WH	7530	I	—	Driver Seat Adjuster Memory Module LIN Bus 1	44	0.35	GN / WH	7530	VI	—
45	0.5	BK / YE	1691	I	—	Automatic Day/Night Mirror Low Reference	45	0.35	BK / YE	1691	VI	—
46	3 0.75	BK BK	1250 1250	II II	AED/AEF AEF	Ground Ground	46	3	BK	1250	V	—

X600 Passenger Door Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
47	2.5	RD / WH	1340	II	—	Battery Positive Voltage	47	2.5	RD / WH	1340	V	—
48	0.75	BN / YE	294	III	—	Door Lock Actuator Unlock Control	48	0.75	BN / YE	294	VII	—
49	0.75	GY	295	III	—	Door Lock Actuator Lock Control	49	0.75	GY	295	VII	—
50	0.75	YE / BK	117	III	—	Right Front Speaker [-] Control 1	50	0.75	YE / BK	117	VII	—
51	0.75	YE	200	III	—	Right Front Speaker 1 [+] Control	51	0.75	YE	200	VII	—
52	0	BK	2627	IV	—	Right Side-view Camera Video Signal [+]	52	0	—	2627	VIII	—

X605 Passenger Door Wiring Harness to Passenger Door Trim Wiring Harness



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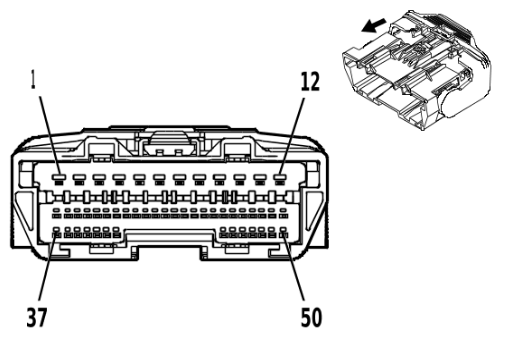


5022037

Connector Part Information

Harness Type: Passenger Door Wiring Harness
OEM Connector: 35283943
Service Connector: Service by Harness - See Part Catalog
Description: 50-Way F 1.2, 2.8 OCS Series(BK)

Connector Part Information

Harness Type: Passenger Door Trim Wiring Harness
OEM Connector: 33390111
Service Connector: Service by Harness - See Part Catalog
Description: 50-Way M 1.2, 2.8 OCS Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	J-35616-4A (PU)	No Tool Required
III	Not required	J-35616-13 (BU)	No Tool Required
IV	Not required	J-35616-17 (L-GN)	No Tool Required
V	Not required	J-35616-5 (PU)	No Tool Required

X605 Passenger Door Wiring Harness to Passenger Door Trim Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.75	YE / WH	5004	II	—	Right Outside Rearview Mirror Folding Motor Unfold Control	1	0.5	YE / WH	5004	V	—
2	0.5	BU / GY	5023	II	—	Right Outside Rearview Mirror Folding Motor Fold Control	2	0.5	BU / GY	5023	V	—
3	2.5	RD / WH	1340	II	—	Battery Positive Voltage	3	2.5	RD / WH	1340	V	—
4 - 6	—	—	—	—	—	Not Occupied	4 - 6	—	—	—	—	—
7	2	GN / GY	3387	II	—	Passenger Window Motor Up Control	7	2.5	GN / GY	3387	V	—
8	2	YE / BU	3388	II	—	Passenger Window Motor Down Control	8	2.5	YE / BU	3388	V	—

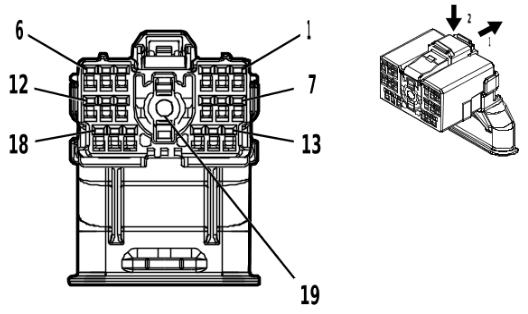
X605 Passenger Door Wiring Harness to Passenger Door Trim Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
9	—	—	—	—	—	Not Occupied	9	—	—	—	—	—
10	2.5	BK	1250	II	—	Ground Ground	10	3 2.5	BK BK	1250 1250	V V	AEF/ AU3 A7K/ KA1/ KQV
11 - 12	—	—	—	—	—	Not Occupied	11 - 12	—	—	—	—	—
13	0.5	WH	3398	I	—	Passenger Outside Rearview Mirror Motor Common Control	13	0.35	WH	3398	III	—
14	0.5	VT / WH	3403	I	—	Passenger Outside Rearview Mirror Position Sensor Left [-] Right [+] Signal	14	0.35	VT / WH	3403	III	—
15	0.35	YE / VT	3397	I	—	Passenger Outside Rearview Mirror Motor Up [+] Down [-] Control	15	0.35	YE / VT	3397	III	—
16	0.5	GN / BK	3396	I	—	Passenger Outside Rearview Mirror Motor Right [+] Left [-] Control	16	0.35	GN / BK	3396	III	—
17	0.5	YE	6817	I	—	LED Backlight Dimming Control 1 LED Backlight Dimming Control 1	17	0.35	YE	6817	III	—
18	0.5	BK / GN	3400	I	—	Passenger Outside Rearview Mirror Position Sensor Low Reference	18	0.35	BK / GN	3400	III	—
19	0.5	GN / WH	7530	I	—	Driver Seat Adjuster Memory Module LIN Bus 1	19	0.35	GN / WH	7530	III	—
20	0.5	BN / VT	245	I	—	Passenger Door Lock Switch Unlock Control	20	0.35	BN / VT	245	III	—
21	0.35	YE / RD	3399	I	—	Passenger Outside Rearview Mirror Position Sensor Voltage Reference	21	0.35	YE / RD	3399	III	—

X605 Passenger Door Wiring Harness to Passenger Door Trim Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
22	0.35	BK	1250	I	—	Ground	22	0.35	BK	1250	III	—
23	0.5	YE / VT	244	I	—	Passenger Door Lock Switch Lock Control	23	0.35	YE / VT	244	III	—
24	0.35	WH / YE	7557	I	—	Interior Door Handle Accent Lighting Control	24	0.35	WH / YE	7557	III	—
25	0.35	YE / BK	3384	I	—	Window Switch Passenger Up Signal	25	0.35	YE / BK	3384	III	—
26	0.5	YE / WH	3413	I	—	Passenger Outside Rearview Mirror Motor Unfold Control	26	0.5	YE / WH	3413	IV	—
27	0.5	BU / GY	3414	I	—	Passenger Outside Rearview Mirror Motor Fold Control	27	0.5	BU / GY	3414	IV	—
28	0.5	BN / YE	3385	I	—	Window Switch Passenger Down Signal	28	0.35	BN / YE	3385	III	—
29	0.5	GY	746	I	—	Right Front Door Ajar Switch Signal	29	0.35	GY	746	III	—
30	0.35	BU / YE	3401	I	—	Passenger Outside Rearview Mirror Position Sensor Up [+] Down [-] Signal	30	0.35	BU / YE	3401	III	—
31 - 33	—	—	—	—	—	Not Occupied	31 - 33	—	—	—	—	—
34	0.35	VT / GY	3386	I	—	Window Switch Passenger Express Signal	34	0.35	VT / GY	3386	III	—
35	0.5	GN / YE	6134	I	—	Body Control Module LIN Bus 3	35	0.35	GN / YE	6134	III	—
36 - 50	—	—	—	—	—	Not Occupied	36 - 50	—	—	—	—	—

X610 Passenger Door Wiring Harness to Outside Rearview Mirror - Passenger Door Wiring Harness



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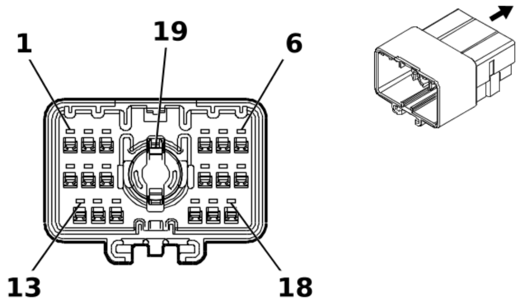


4969165

Connector Part Information

Harness Type: Passenger Door Wiring Harness

OEM Connector: 35077331

Service Connector: Service by Harness - See Part Catalog

Description: 19-Way F 1.2 MCON, Coaxial Series(BK)

Connector Part Information

Harness Type: Outside Rearview Mirror Wiring Harness - Passenger Door Wiring Harness

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 19-Way M (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	No Tool Required	No Tool Required

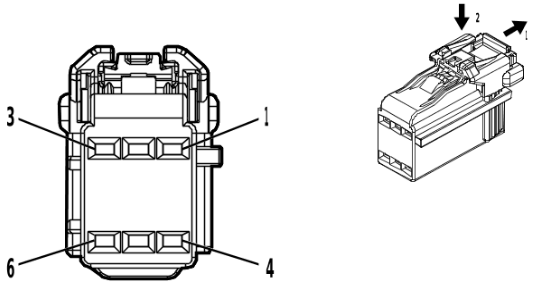
X610 Passenger Door Wiring Harness to Outside Rearview Mirror - Passenger Door Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GN / BK	3396	I	—	Passenger Outside Rearview Mirror Motor Right [+] Left [-] Control	1	0.5	GN / BK	3396	II	—
2	0.5	YE / VT	3397	I	—	Passenger Outside Rearview Mirror Motor Up [+] Down [-] Control	2	0.5	YE / VT	3397	II	—
3	0.5	WH / BN	3410	I	—	Mirror Outside Rearview Mirror Fold Control	3	0.5	WH / BN	3410	II	—
4	0.5	GY	1761	I	—	Right Side Object Detection LED Control	4	0.5	GY	1761	II	—
5	0.5	GY / GN	5996	I	—	Driver Outside Rearview Mirror Courtesy Lamp Control	5	0.5	GY / GN	5996	II	—

X610 Passenger Door Wiring Harness to Outside Rearview Mirror - Passenger Door Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
6	0.5	GY / BN	309	I	—	Right Park Lamp Control	6	0.5	GY / BN	309	II	—
7	0.5	BN / YE	2267	I	—	Outside Rearview Mirror Heater Control	7	0.5	BN / YE	2267	II	—
8	0.5	GN / VT	1315	I	—	Right Front Turn Signal Lamp Control	8	0.5	GN / VT	1315	II	—
9	0.75	BK	1250	I	—	Ground	9	0.75	BK	1250	II	—
10	0.35	BU / GY	636	I	—	Ambient Air Temperature Sensor Signal	10	0.35	BU / GY	636	II	—
11	0.5	BU	2082	I	—	Puddle Lamp Control	11	0.5	BU	2082	II	—
12	0.5	BK / YE	1691	I	—	Automatic Day/Night Mirror Low Reference	12	0.5	BK / YE	1691	II	—
13	0.5	WH / VT	968	I	—	Auxiliary 4 Control	13	0.5	WH / VT	968	II	—
14	0.5	WH	3398	I	—	Passenger Outside Rearview Mirror Motor Common Control	14	0.5	WH	3398	II	—
15	0.5	VT / YE	3409	I	—	Outside Rearview Mirror Motor Unfold Control	15	0.5	VT / YE	3409	II	—
16	—	—	—	—	—	Not Occupied	16	—	—	—	—	—
17	0.5	YE / WH	1690	I	—	Mirror Dimming Signal	17	0.5	YE / WH	1690	II	—
18	0.35	BK / GN	580	I	—	Engine Control Sensors Low Reference 2	18	0.35	BK / GN	580	II	—
19	—	—	—	—	—	Not Occupied	19	—	—	—	—	—

X611 Passenger Door Wiring Harness to Outside Rearview Mirror Wiring Harness - Passenger Door Wiring Harness



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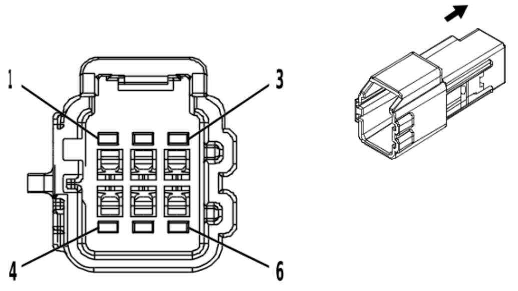


4446774

Connector Part Information

Harness Type: Passenger Door Wiring Harness

OEM Connector: 35327305

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way F 1.2 Series(BK)

Connector Part Information

Harness Type: Outside Rearview Mirror Wiring Harness - Passenger Door Wiring Harness

OEM Connector: Not Available

Service Connector: Service by Harness - See Part Catalog

Description: 6-Way M (BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	No Tool Required	No Tool Required

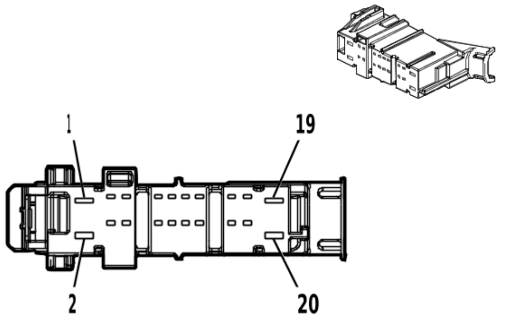
X611 Passenger Door Wiring Harness to Outside Rearview Mirror Wiring Harness - Passenger Door Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	VT / WH	3403	I	—	Passenger Outside Rearview Mirror Position Sensor Left [-] Right [+] Signal	1	0.5	VT / WH	3403	II	—
2	0.35	YE / RD	3399	I	—	Passenger Outside Rearview Mirror Position Sensor Voltage Reference	2	0.35	YE / RD	3399	II	—
3	0.35	BU / YE	3401	I	—	Passenger Outside Rearview Mirror Position Sensor Up [+] Down [-] Signal	3	0.35	BU / YE	3401	II	—

X611 Passenger Door Wiring Harness to Outside Rearview Mirror Wiring Harness - Passenger Door Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
4	0.5	BK / GN	3400	I	—	Passenger Outside Rearview Mirror Position Sensor Low Reference	4	0.5	BK / GN	3400	II	—
5	0.75	YE / WH	5004	I	—	Right Outside Rearview Mirror Folding Motor Unfold Control	5	0.75	YE / WH	5004	II	—
6	0.5	BU / GY	5023	I	—	Right Outside Rearview Mirror Folding Motor Fold Control	6	0.5	BU / GY	5023	II	—

X700 Left Rear Door Wiring Harness to Body Wiring Harness



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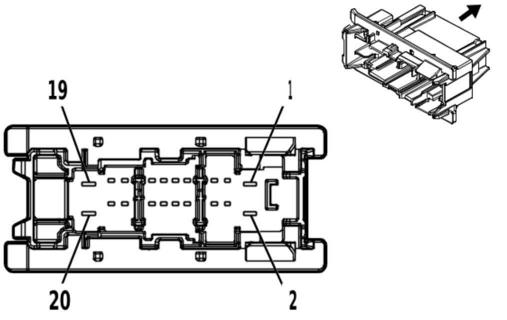


4663657

Connector Part Information

Harness Type: Left Rear Door Wiring Harness
OEM Connector: 33303652
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 1.2 MCON, 2.8 MCP Series(BK)

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35215020
Service Connector: 13527239
Description: 20-Way M 1.2 MCON, 2.8 MCP Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	J-35616-35 (VT)	No Tool Required
III	13586064	J-35616-5 (PU)	J-38125-36
IV	84616651	J-35616-13 (BU)	J-38125-215A

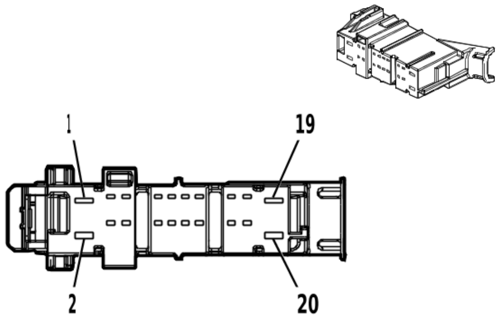
X700 Left Rear Door Wiring Harness to Body Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	RD / BU	1842	II	—	Battery Positive Voltage	1	2.5	RD / BU	1842	III	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.75	BN / YE	294	I	—	Door Lock Actuator Unlock Control	3	0.75	BN / YE	294	IV	—
4 - 5	—	—	—	—	—	Not Occupied	4 - 5	—	—	—	—	—
6	0.5	PK	6157	I	—	Left Rear Door Handle Switch Signal	6	0.35	BN / YE	6157	IV	—
7 - 8	—	—	—	—	—	Not Occupied	7 - 8	—	—	—	—	—
9	0.5	OG / BU	6622	I	—	Left Rear Side Impact Sensor Signal	9	0.35	OG / BU	6622	IV	—
10	0.5	BK / OG	6623	I	—	Left Rear Side Impact Sensor Low Reference	10	0.35	BK / OG	6623	IV	—
11	—	—	—	—	—	Not Occupied	11	—	—	—	—	—

X700 Left Rear Door Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
12	0.5	GN / GY	6135	I	—	Body Control Module LIN Bus 4	12	0.35	GN / GY	6135	IV	—
13	0.5	BU	116	I	—	Left Rear Speaker [-] Control	13	0.5	GN / BK	116	IV	—
14	0.5	GN	199	I	—	Left Rear Speaker [+] Control	14	0.5	GN	199	IV	—
15 - 16	—	—	—	—	—	Not Occupied	15 - 16	—	—	—	—	—
17	0.75	GY	295	I	—	Door Lock Actuator Lock Control	17	0.75	GY	295	IV	—
18 - 19	—	—	—	—	—	Not Occupied	18 - 19	—	—	—	—	—
20	2.5	BK	1150	II	—	Ground	20	2.5	BK	1150	III	—

X800 Right Rear Door Wiring Harness to Body Wiring Harness



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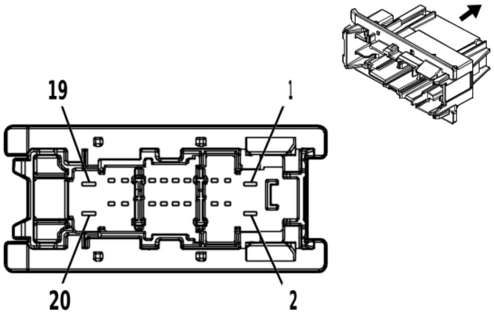


4663657

Connector Part Information

Harness Type: Right Rear Door Wiring Harness
OEM Connector: 33303652
Service Connector: Service by Harness - See Part Catalog
Description: 20-Way F 1.2 MCON, 2.8 MCP Series(BK)

Connector Part Information

Harness Type: Body Wiring Harness
OEM Connector: 35215020
Service Connector: 13527239
Description: 20-Way M 1.2 MCON, 2.8 MCP Series(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	J-35616-35 (VT)	No Tool Required
III	13586064	J-35616-5 (PU)	J-38125-36
IV	84616651	J-35616-13 (BU)	J-38125-215A

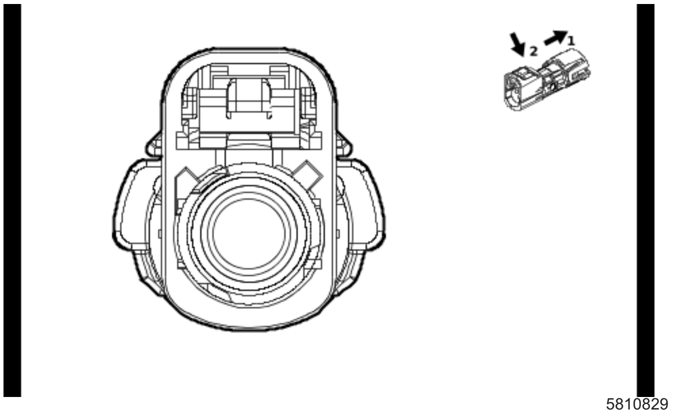
X800 Right Rear Door Wiring Harness to Body Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	2.5	RD / WH	1340	II	—	Battery Positive Voltage	1	2.5	RD / WH	1340	III	—
2	—	—	—	—	—	Not Occupied	2	—	—	—	—	—
3	0.75	BN / YE	294	I	—	Door Lock Actuator Unlock Control	3	0.75	BN / YE	294	IV	—
4 - 5	—	—	—	—	—	Not Occupied	4 - 5	—	—	—	—	—
6	0.5	YE / GY	6158	I	—	Right Rear Door Handle Switch Signal	6	0.35	YE / GY	6158	IV	—
7 - 8	—	—	—	—	—	Not Occupied	7 - 8	—	—	—	—	—
9	0.5	OG / VT	6624	I	—	Right Middle Side Impact Sensor Signal	9	0.35	OG / WH	6626	IV	—
10	0.5	BK / OG	6625	I	—	Right Middle Side Impact Sensor Low Reference	10	0.35	BK / OG	6627	IV	—
11	—	—	—	—	—	Not Occupied	11	—	—	—	—	—

X800 Right Rear Door Wiring Harness to Body Wiring Harness (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
12	0.5	GN / GY	6135	I	—	Body Control Module LIN Bus 4	12	0.35	GN / GY	6135	IV	—
13	0.5	BU / BK	115	I	—	Right Rear Speaker [-] Control	13	0.5	BU / BK	115	IV	—
14	0.5	WH	46	I	—	Right Rear Speaker [+] Control	14	0.5	WH	46	IV	—
15 - 16	—	—	—	—	—	Not Occupied	15 - 16	—	—	—	—	—
17	0.75	GY	295	I	—	Door Lock Actuator Lock Control	17	0.75	GY	295	IV	—
18 - 19	—	—	—	—	—	Not Occupied	18 - 19	—	—	—	—	—
20	2.5	BK	1250	II	—	Ground	20	2.5	BK	1250	III	—

X905 Endgate Wiring Harness to Chassis Wiring Harness



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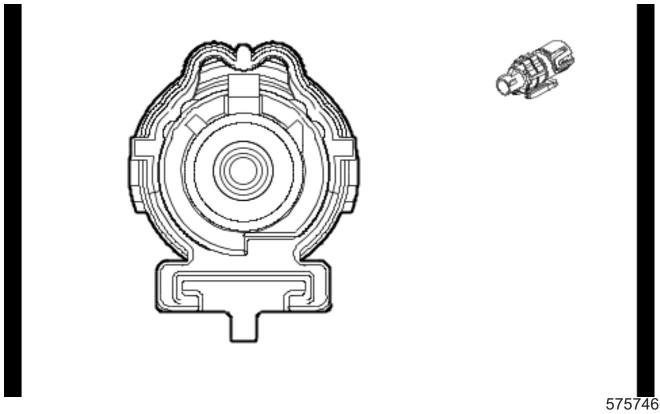

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Connector Part Information

Harness Type: Endgate Wiring Harness COAX

OEM Connector: 35187033

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way F Coax Type(WH)

Connector Part Information

Harness Type: Chassis Wiring Harness COAX

OEM Connector: 33338240

Service Connector: Service by Cable Assembly — See Part Catalog

Description: 1-Way M Coax Type, Sealed(WH)

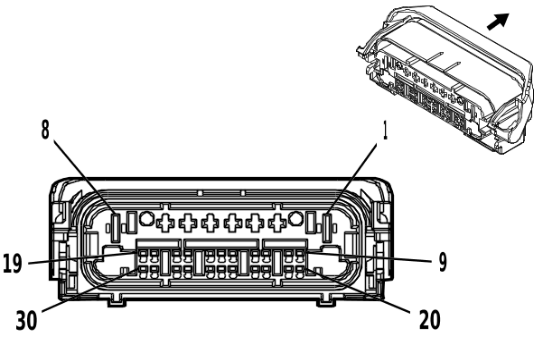
Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	No Tool Required	No Tool Required

X905 Endgate Wiring Harness to Chassis Wiring Harness

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
—	—	Coax Cable	—	I	—	Rear Vision Camera Coaxial Video Signal	—	—	Coax Cable	—	I	—

X926 Endgate Wiring Harness to Chassis Wiring Harness (QK2/QT5/QT6)



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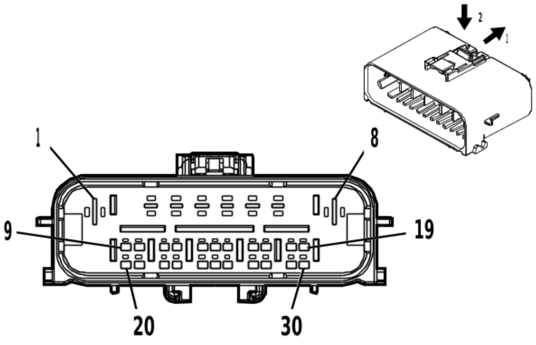


4817393

Connector Part Information

Harness Type: Endgate Wiring Harness

OEM Connector: 33378383

Service Connector: Service by Harness - See Part Catalog

Description: 30-Way F 1.2 MCON, 2.8, 6.3 MCP Series, Sealed(BK)

Connector Part Information

Harness Type: Chassis Wiring Harness

OEM Connector: 35530712

Service Connector: 19371177

Description: 30-Way M 1.2 MCON-CB, 2.8 MCP Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-16 (L-GN)	No Tool Required
II	Not required	J-35616-40 (BU)	No Tool Required
III	13575376	J-35616-32 (OG)	J-38125-36
IV	19330704	J-35616-13 (BU)	J-38125-215A

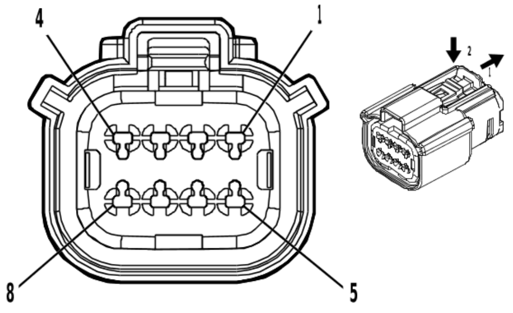
X926 Endgate Wiring Harness to Chassis Wiring Harness (QK2/QT5/QT6)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	—	—	—	—	—	Battery Positive Voltage	1	2.5	RD / GY	7040	III	—
2 - 7	—	—	—	—	—	Not Occupied	2 - 7	—	—	—	—	—
8	2.5	BK	1450	II	—	Ground	8	4	BK	1450	III	—
9	0.5	BK / WH	2751	I	—	Signal Ground	9	0.5	BK / WH	2751	IV	—
10	0.5	YE / BU	7295	I	—	Left Minor Endgate Ajar Signal	10	0.5	YE / RD	7295	IV	—
11	—	—	—	—	—	Not Occupied	11	—	—	—	—	—
12	0.35	BU	6974	I	—	Rearview Camera Low Reference	12	0.5	BU	6974	IV	—
13	—	—	—	—	—	Endgate Release Switch Analog Signal Interior	13	0.5	GY	1198	IV	—
14	0.5	WH / BU	6973	I	—	Rearview Camera Signal [-]	14	0.5	WH / BU	6973	IV	—

X926 Endgate Wiring Harness to Chassis Wiring Harness (QK2/QT5/QT6) (cont'd)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
15	—	—	—	—	—	Not Occupied	15	—	—	—	—	—
16	0.75	VT	7725	I	—	Minor Endgate Motor Control	16	0.75	VT	7725	IV	—
17	0.75	YE / BK	7730	I	—	Major Endgate Motor Low Reference	17	0.75	YE / BK	7730	IV	—
18	0.75	BN / BK	7726	I	—	Minor Endgate Motor Low Reference	18	0.75	BN / BK	7726	IV	—
19	—	—	—	—	—	Not Occupied	19	—	—	—	—	—
20	—	—	—	—	—	Low Speed GMLAN Serial Data	20	0.5	GN	5060	IV	—
21	0.5	VT / GN	1739	I	—	Run/Crank Ignition 1 Voltage	21	0.5	VT / GN	1739	IV	—
22 - 24	—	—	—	—	—	Not Occupied	22 - 24	—	—	—	—	—
25	0.35	WH / VT	1430	I	—	Exterior Courtesy Lamp Control	25	0.5	WH / VT	1430	IV	—
26	0.5	GY / YE	6972	I	—	Rearview Camera Signal [+]	26	0.5	GY / YE	6972	IV	—
27	0.5	GY	7292	I	—	Major Endgate Release Switch Signal Exterior	27	0.5	GY / GN	7292	IV	—
28	0.35	YE	7294	I	—	Minor Endgate Release Switch Discrete Signal Exterior	28	0.5	YE	7294	IV	—
29	—	—	—	—	—	Not Occupied	29	—	—	—	—	—
30	0.75	GN	1299	I	—	Major Endgate Motor Control	30	0.75	GN	1299	IV	—

X927 Rearview Camera Wiring Harness to Chassis Wiring Harness (Chassis Cab)



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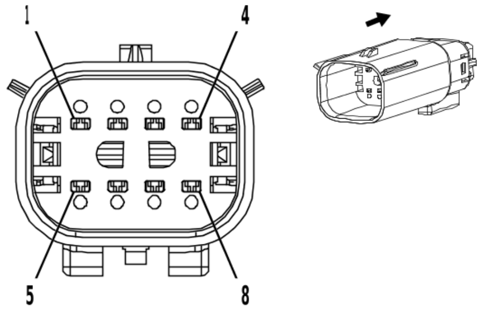


2667653

Connector Part Information

Harness Type: Rearview Camera Wiring Harness
OEM Connector: 35037827
Service Connector: Service by Harness - See Part Catalog
Description: 8-Way F 1.5 MX Series, Sealed(BK)

Connector Part Information

Harness Type: Chassis Wiring Harness
OEM Connector: 35043130
Service Connector: 19370460
Description: 8-Way M 1.5 MX Series, Sealed(BK)

Terminal Part Information

Terminal Type ID	Terminated Lead	Diagnostic Test Probe	Terminal Removal Tool
I	Not required	J-35616-2A (GY)	No Tool Required
II	Not required	J-35616-3 (GY)	No Tool Required

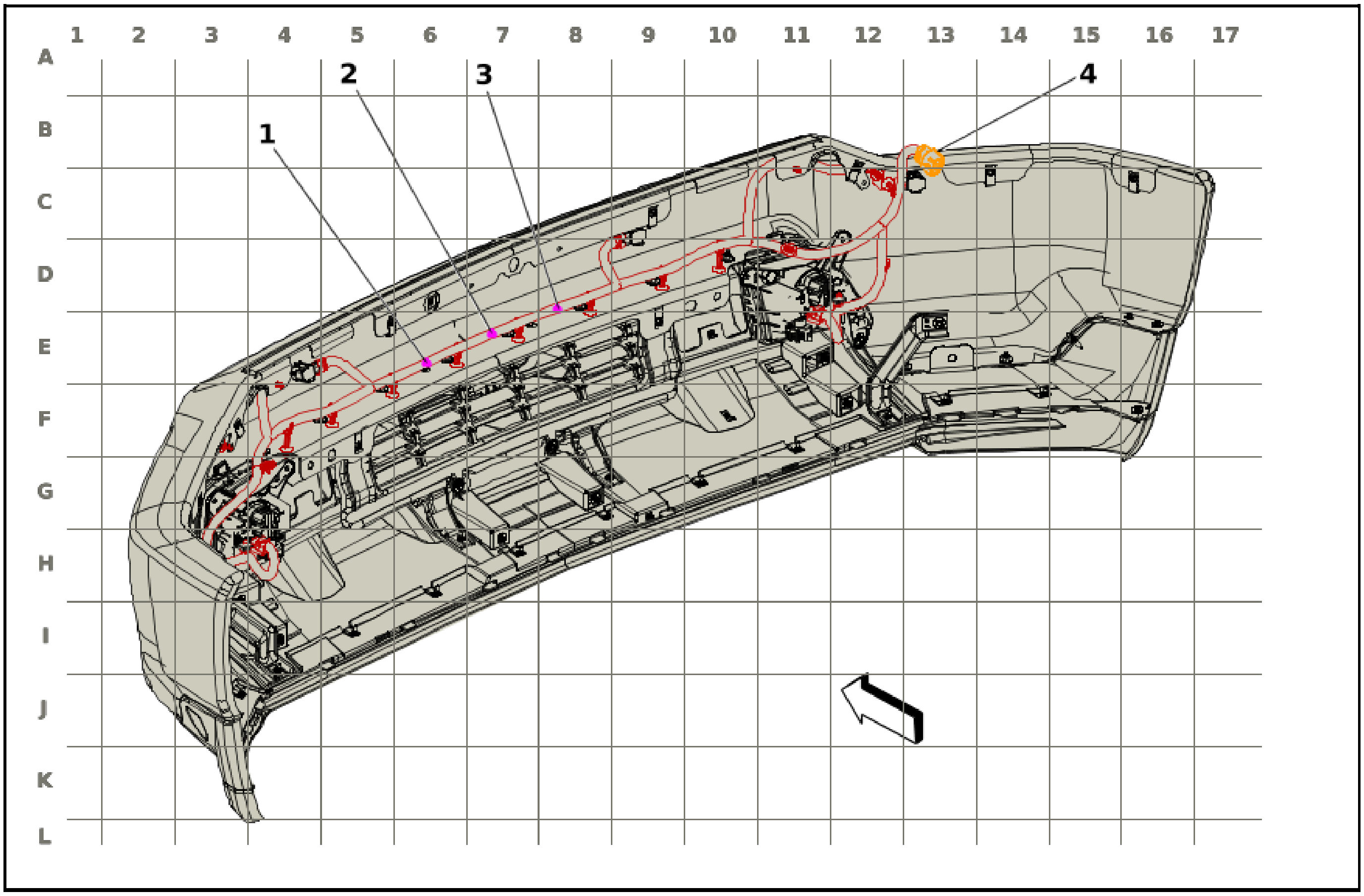
X927 Rearview Camera Wiring Harness to Chassis Wiring Harness (Chassis Cab)

Pin	Size	Color	Circuit	Terminal Type ID	Option	Function	Pin	Size	Color	Circuit	Terminal Type ID	Option
1	0.5	GY / YE	6972	I	—	Rearview Camera Signal [+]	1	0.5	GY / YE	6972	II	—
2	0.35	BU	6974	I	—	Rearview Camera Low Reference	2	0.5	BU	6974	II	—
3	—	—	—	—	—	Not Occupied	3	—	—	—	—	—
4	0.5	WH / BU	6973	I	—	Rearview Camera Signal [-]	4	0.5	WH / BU	6973	II	—
5	0.5	BK / WH	1751	I	—	Signal Ground	5	0.5	BK / WH	1751	II	—
6	0.5	VT / GN	1739	I	—	Run/Crank Ignition 1 Voltage	6	0.5	VT / GN	1739	II	—
7 - 8	—	—	—	—	—	Not Occupied	7 - 8	—	—	—	—	—

Electrical Component Locator and Harness Routing Views

Schematic and Routing Diagrams

Harness Routing Views (Front Bumper Harness Routing (X88))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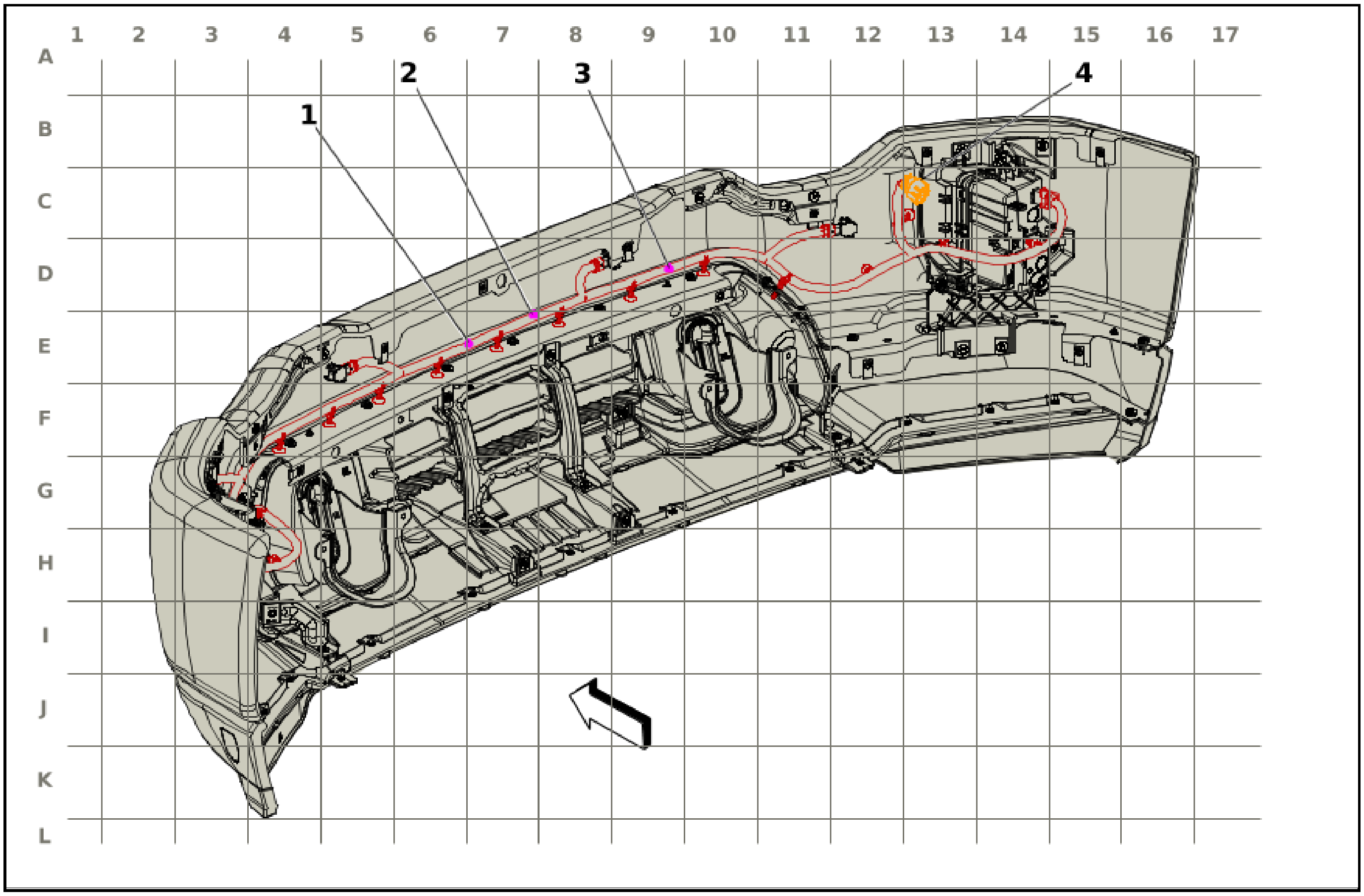
Harness Routing Views (Front Bumper Harness Routing (Z88))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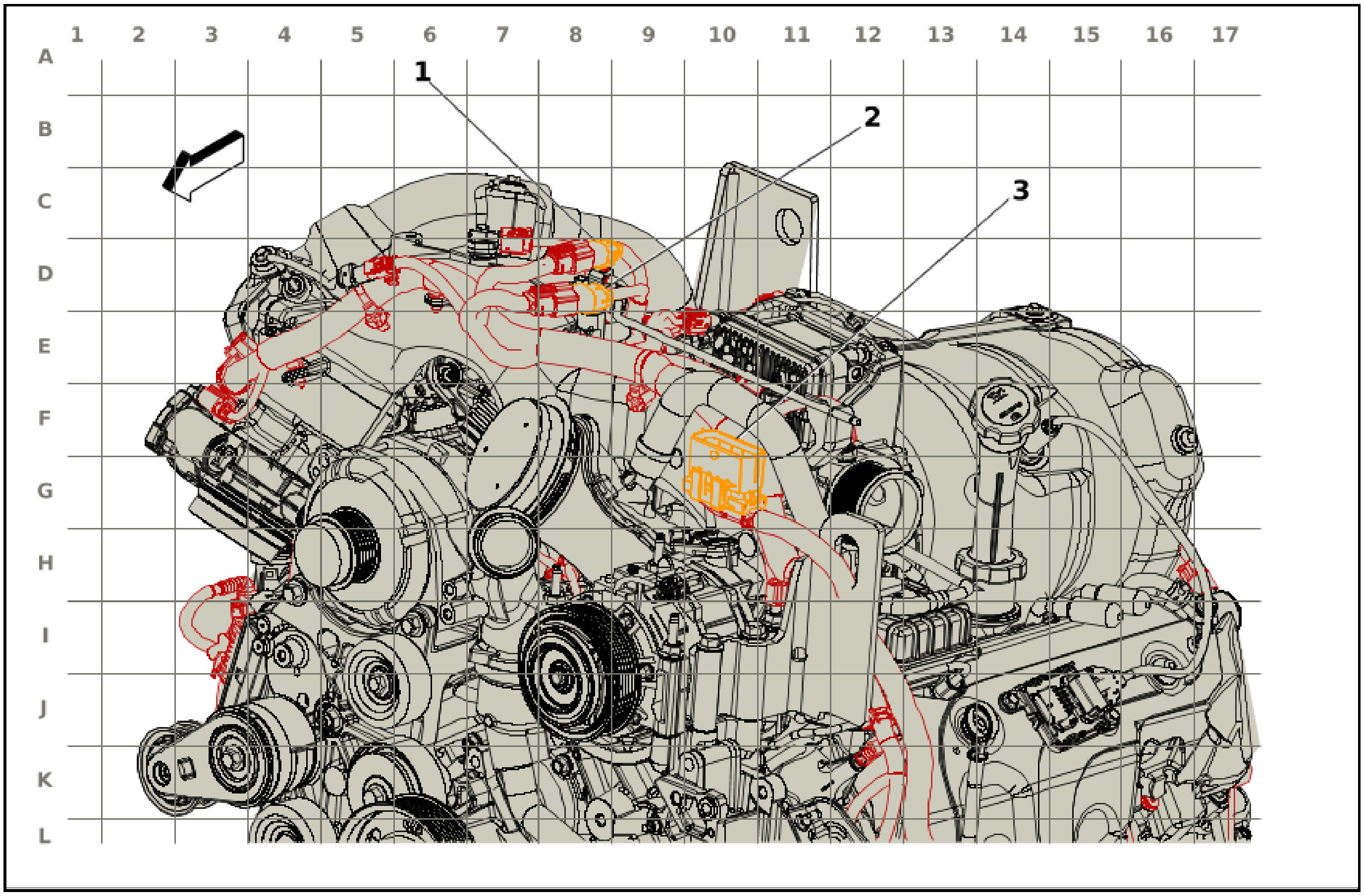
5236889

Harness Routing Views (Engine Harness Routing - Front (L5P))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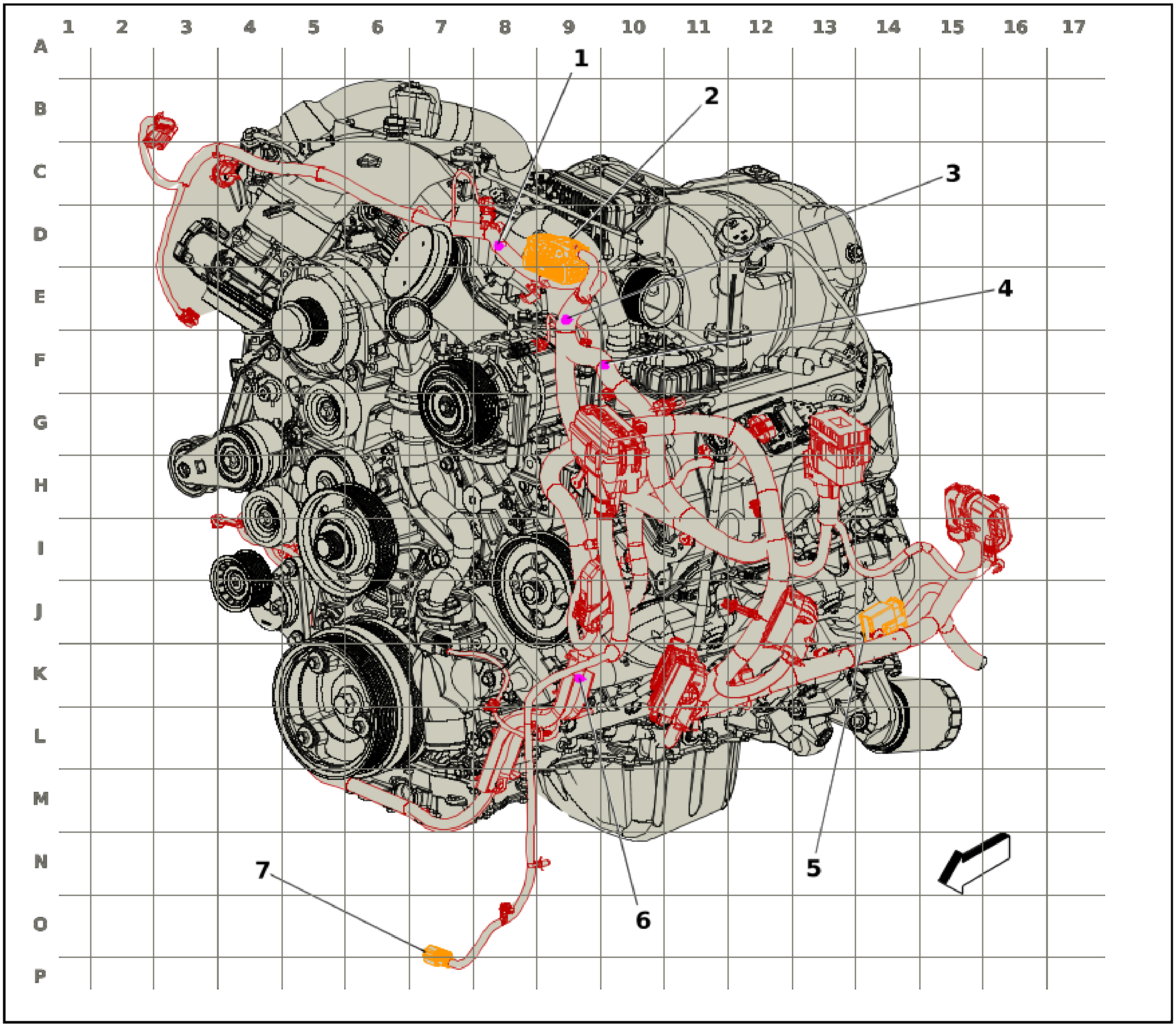
5218903

Items

(1)	X118 Glow Plug Jumper Harness to Engine Jumper Harness (L5P)
(2)	X172 Glow Plug Jumper Harness to Engine Jumper Harness (L5P)
(3)	X116 Engine Harness to Glow Plug Jumper Harness (L5P)

Harness Routing Views (Engine Harness Routing - Left Front (L5P))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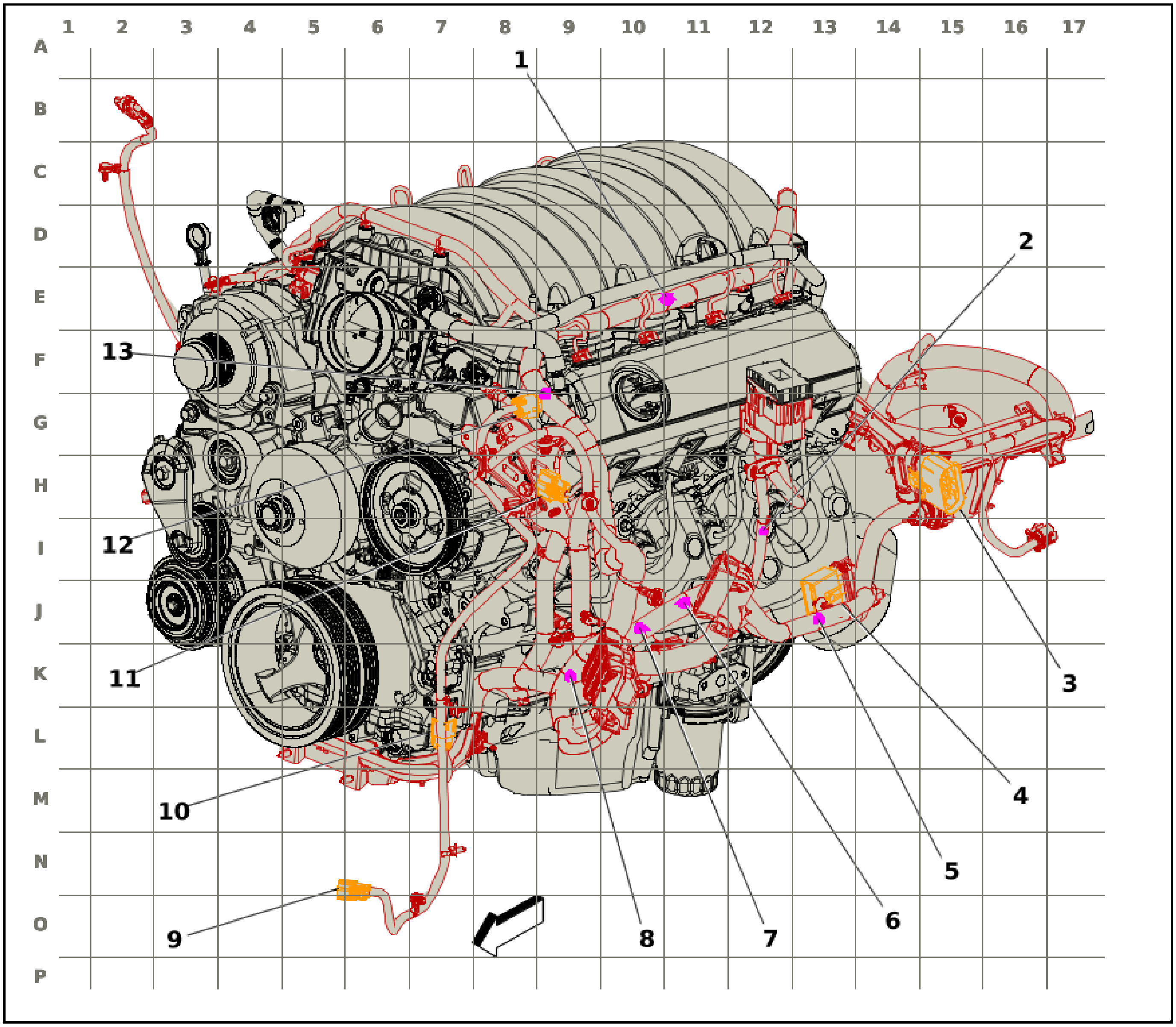
5218366

Items

(1)	J158 Engine Harness
(2)	X116 Engine Harness to Glow Plug Jumper Harness (L5P)
(3)	J112 Engine Harness (L5P)
(4)	J101 Engine Harness (UD5)
(5)	X171 Chassis Harness to Engine Harness
(6)	J155 Engine Harness
(7)	X132 Engine Harness to Active Air Grille Shuttter Harness (WMI)

Harness Routing Views (Engine Harness Routing - Left Front (L8T))

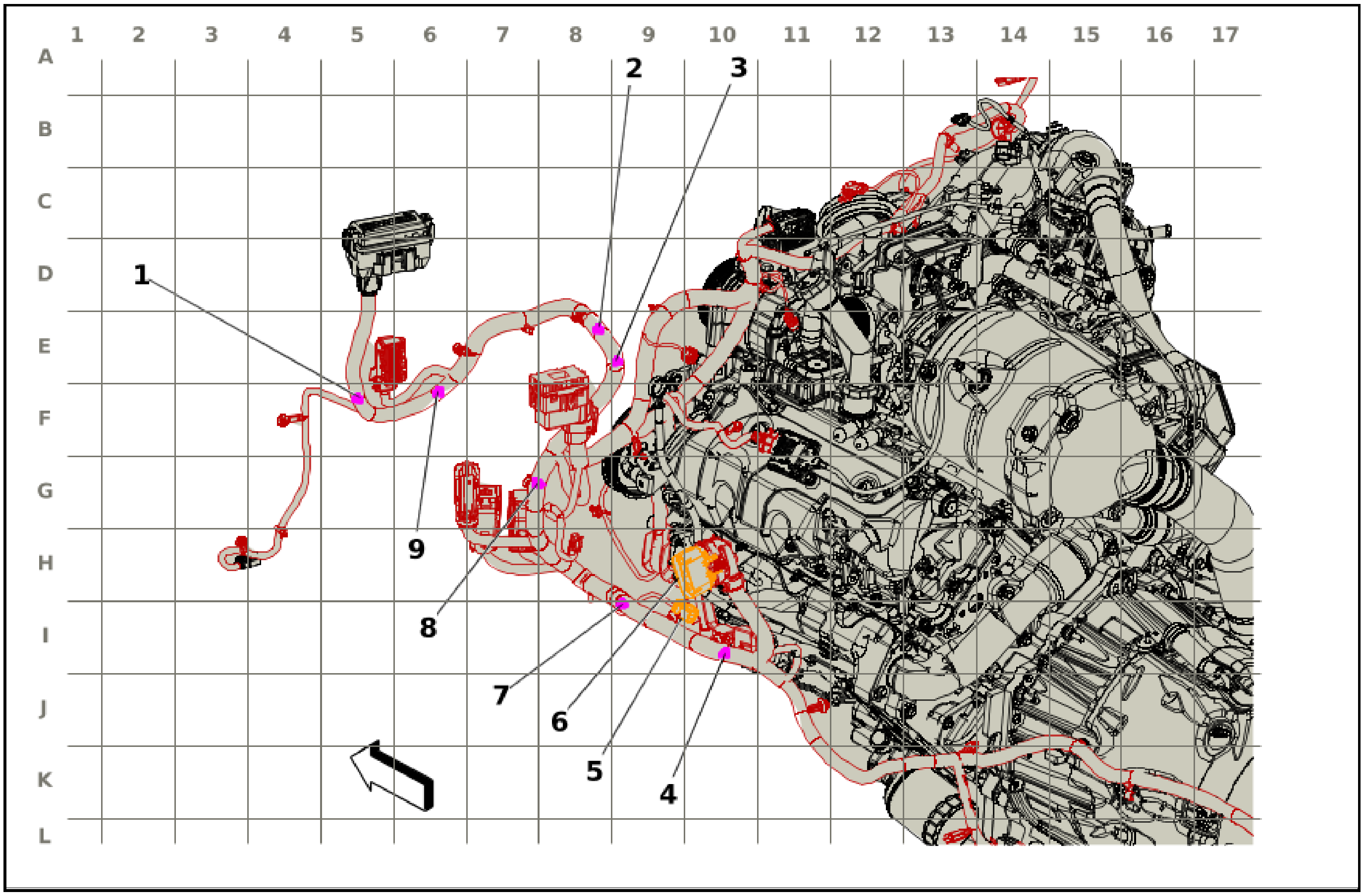


5218368

Items

(1)	J120 Engine Harness (L8T)
(2)	J147 Engine Harness
(3)	X115 Body Harness to Engine Harness
(4)	X171 Chassis Harness to Engine Harness
(5)	J107 Engine Harness (L8T)
(6)	J140 Engine Harness (L5P)
(7)	J154 Engine Harness
(8)	J109 Engine Harness (L8T)
(9)	X132 Engine Harness to Active Air Grille Shutter Harness (WMI)
(10)	X180 Engine Harness to Engine Jumper Harness (L8T)
(11)	X181 Engine Harness to Engine Oil Pressure Jumper Harness (L8T)
(12)	X136 Engine Harness to Auxiliary Battery Harness (K4B)
(13)	J139 Engine Harness (L8T)

Harness Routing Views (Engine Harness Routing - Left Rear (1 of 2) (L5P))

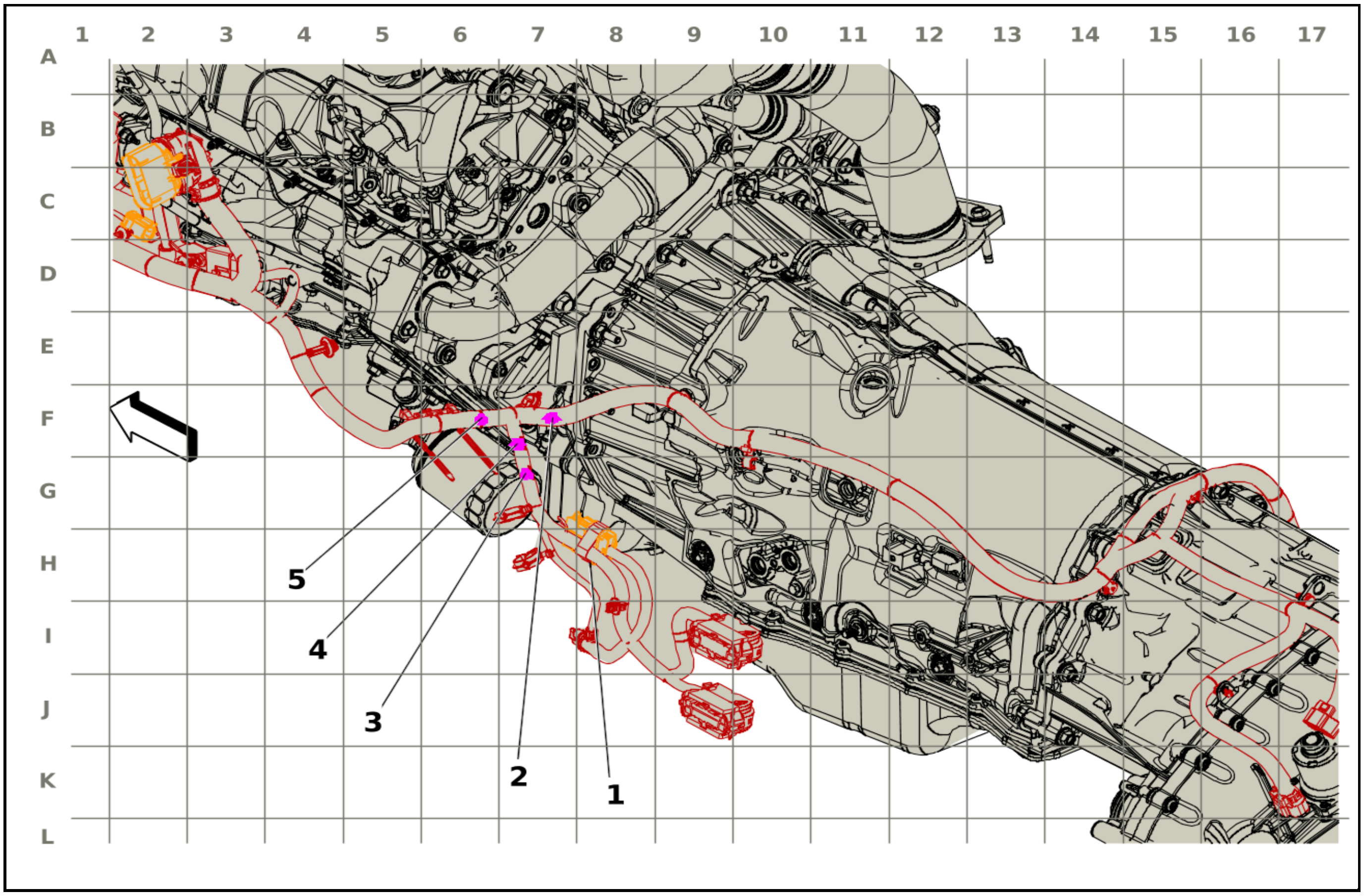


5218370

Items

(1)	J131 Engine Harness (L5P)
(2)	J154 Engine Harness
(3)	J133 Engine Harness (L5P)
(4)	J159 Engine Harness (PTO)
(5)	X111 Engine Harness to Transfer Case Harness (NQH/NQF)
(6)	X115 Body Harness to Engine Harness
(7)	J147 Engine Harness
(8)	J140 Engine Harness (L5P)
(9)	J153 Engine Harness (L5P)

Harness Routing Views (Engine Harness Routing - Left Rear (2 of 2) (L5P))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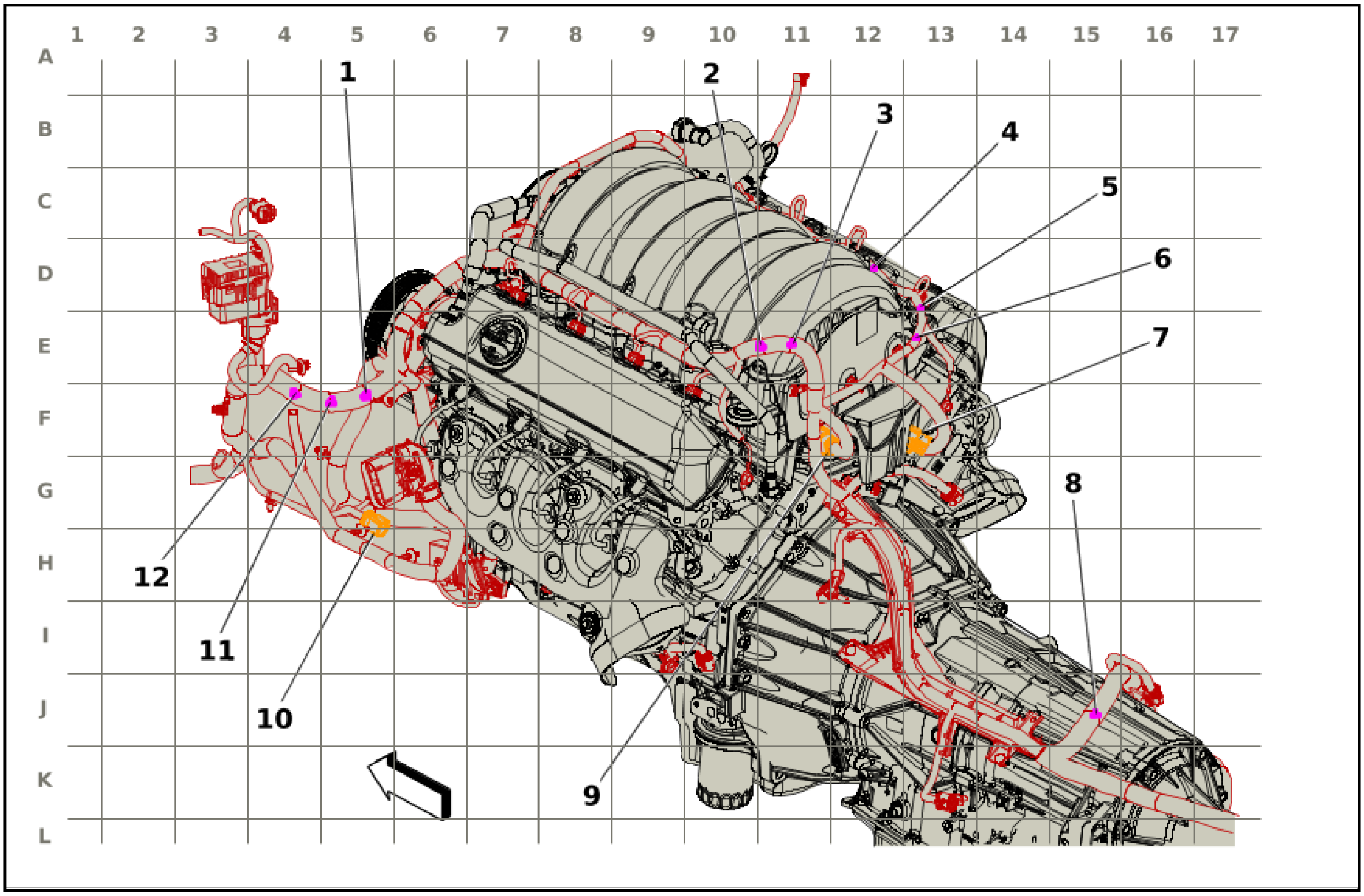
5218372

Items

(1)	X176 Engine Harness to Engine Harness (PTO)
(2)	J160 Engine Harness (PTO)
(3)	J114 Engine Harness (L5P)
(4)	J152 Engine Harness (PTO)
(5)	J161 Engine Harness (PTO)

Harness Routing Views (Engine Harness Routing - Left Rear (L8T))

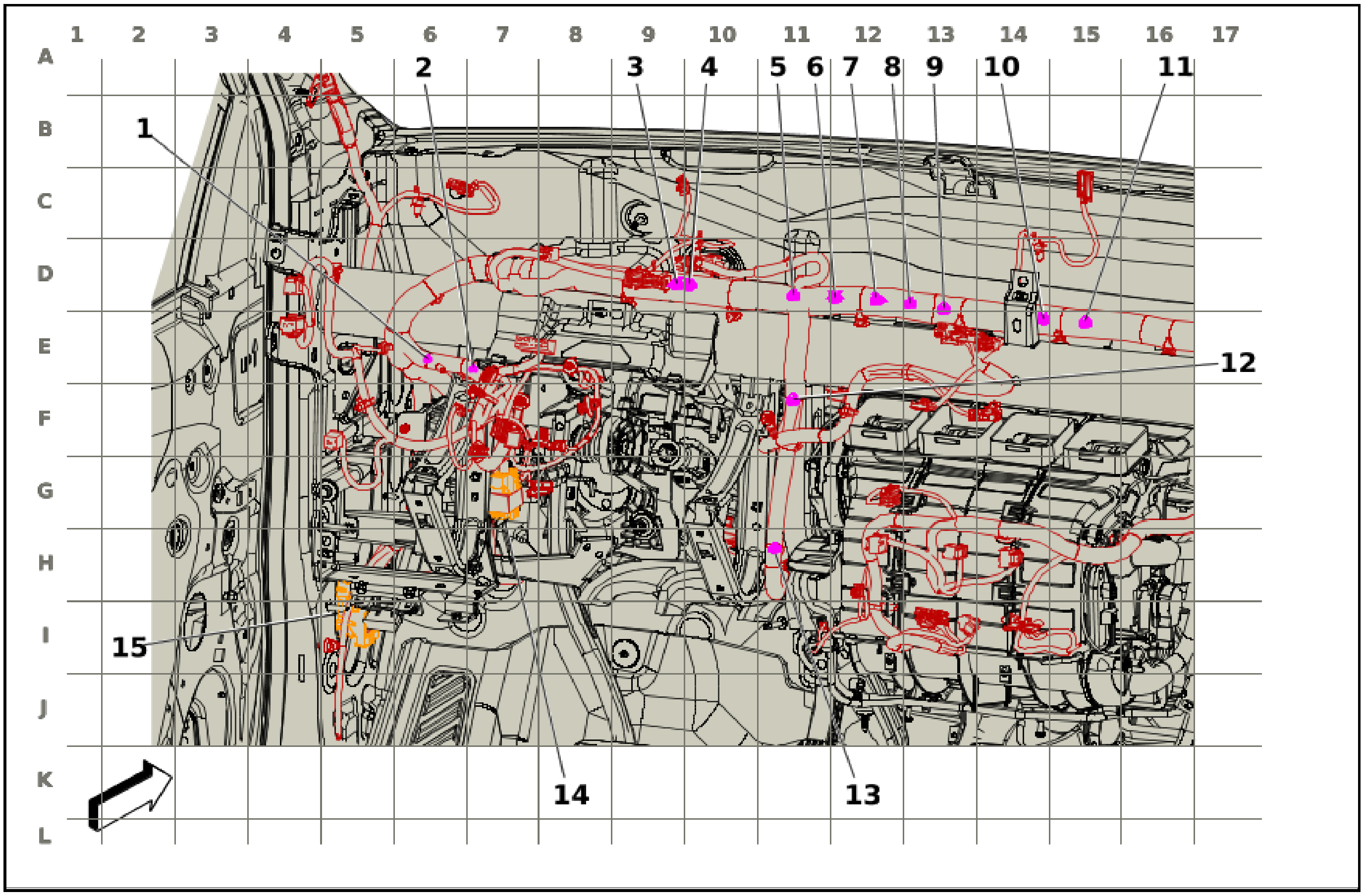


5218374

Items

(1)	J139 Engine Harness (L8T)
(2)	J137 Engine Harness (L8T)
(3)	J136 Engine Harness (L8T)
(4)	J103 Engine Harness (L8T)
(5)	J121 Engine Harness (L8T)
(6)	J138 Engine Harness (L8T)
(7)	X161 Engine Harness to Bank 2 Fuel Rail Harness (L8T)
(8)	J145 Engine Harness (MYD)
(9)	X160 Engine Harness to Even Fuel Injector Harness (L8T)
(10)	X111 Engine Harness to Transfer Case Harness (NQH/NQF)
(11)	J158 Engine Harness
(12)	J108 Engine Harness (L8T)

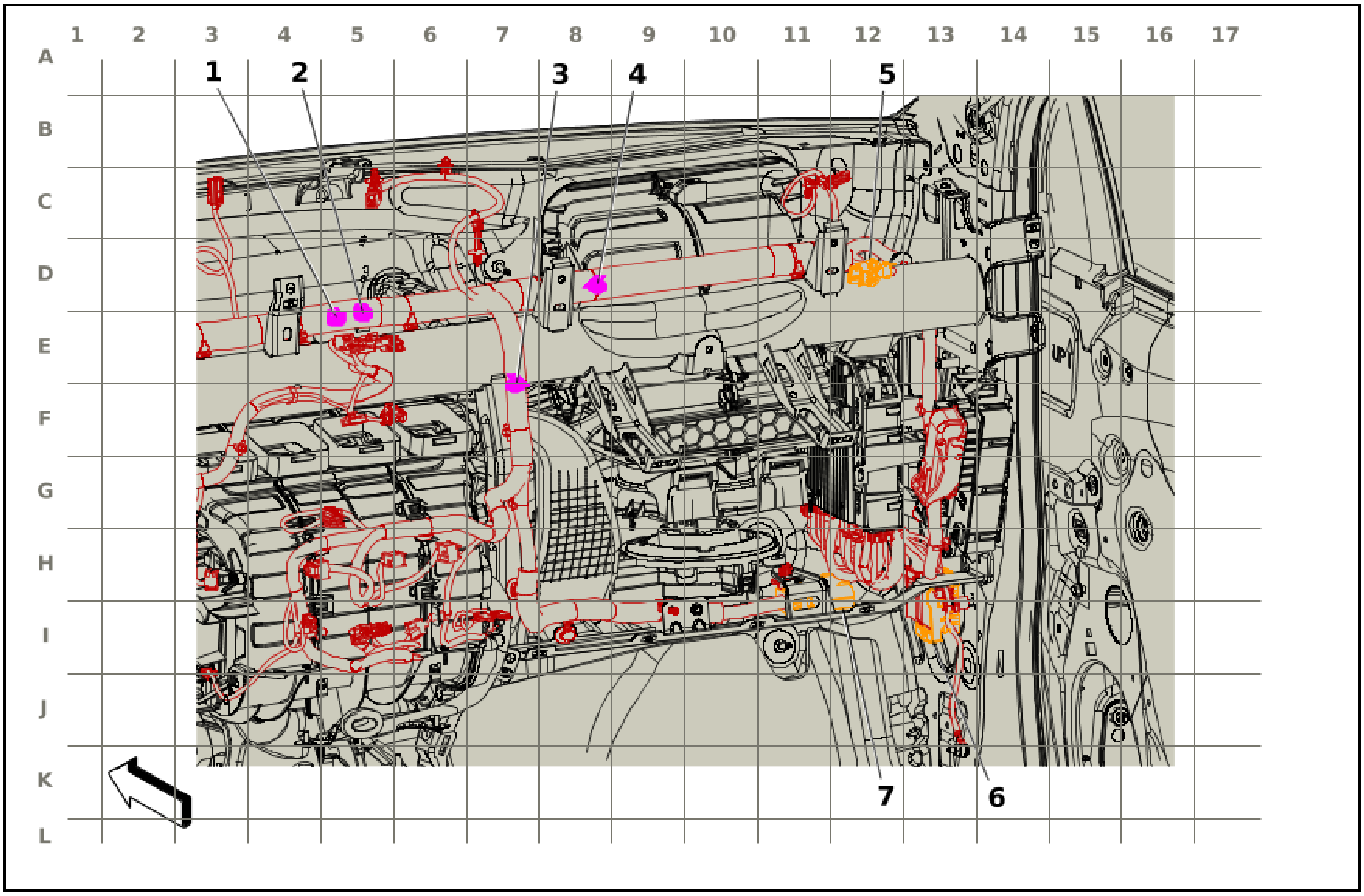
Harness Routing Views (Instrument Panel Harness Routing - Left Side)



Items

(1)	J208 Instrument Panel Harness
(2)	J218 Steering Wheel Harness (-BTM)
(3)	J201 Instrument Panel Harness (UV6)
(4)	J207 Instrument Panel Harness
(5)	J213 Instrument Panel Harness
(6)	J209 Instrument Panel Harness
(7)	J205 Instrument Panel Harness
(8)	J216 Instrument Panel Harness
(9)	J224 Instrument Panel Harness
(10)	J235 Instrument Panel Harness
(11)	J206 Instrument Panel Harness
(12)	J210 Instrument Panel Harness (UE1)
(13)	J215 Instrument Panel Harness
(14)	X260 Auxiliary Instrument Panel Harness to Instrument Panel Harness
(15)	X225 Instrument Panel Harness to Body Harness

Harness Routing Views (Instrument Panel Harness Routing - Right Side (1 of 2))



5254389

Items

(1) J204 Instrument Panel Harness

(2) J220 Instrument Panel Harness

(3) J202 Instrument Panel Harness

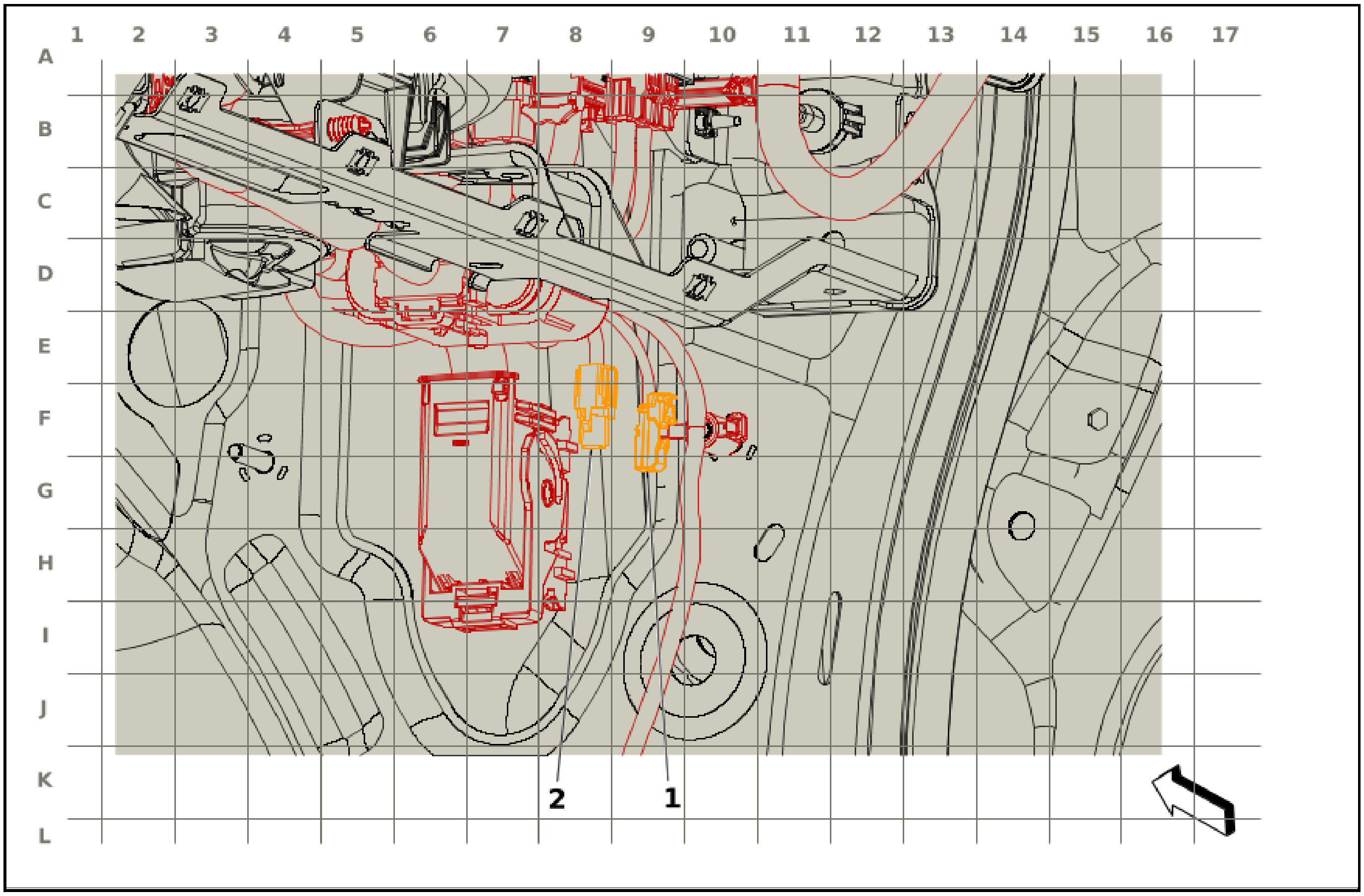
(4) J223 Instrument Panel Harness

(5) X205 Instrument Panel Harness to Passenger Instrument Panel Air Bag Jumper Harness

(6) X275 Instrument Panel Harness to Body Harness

(7) X256 Headliner Harness to Instrument Panel Harness

Harness Routing Views (Instrument Panel Harness Routing - Right Side (2 of 2))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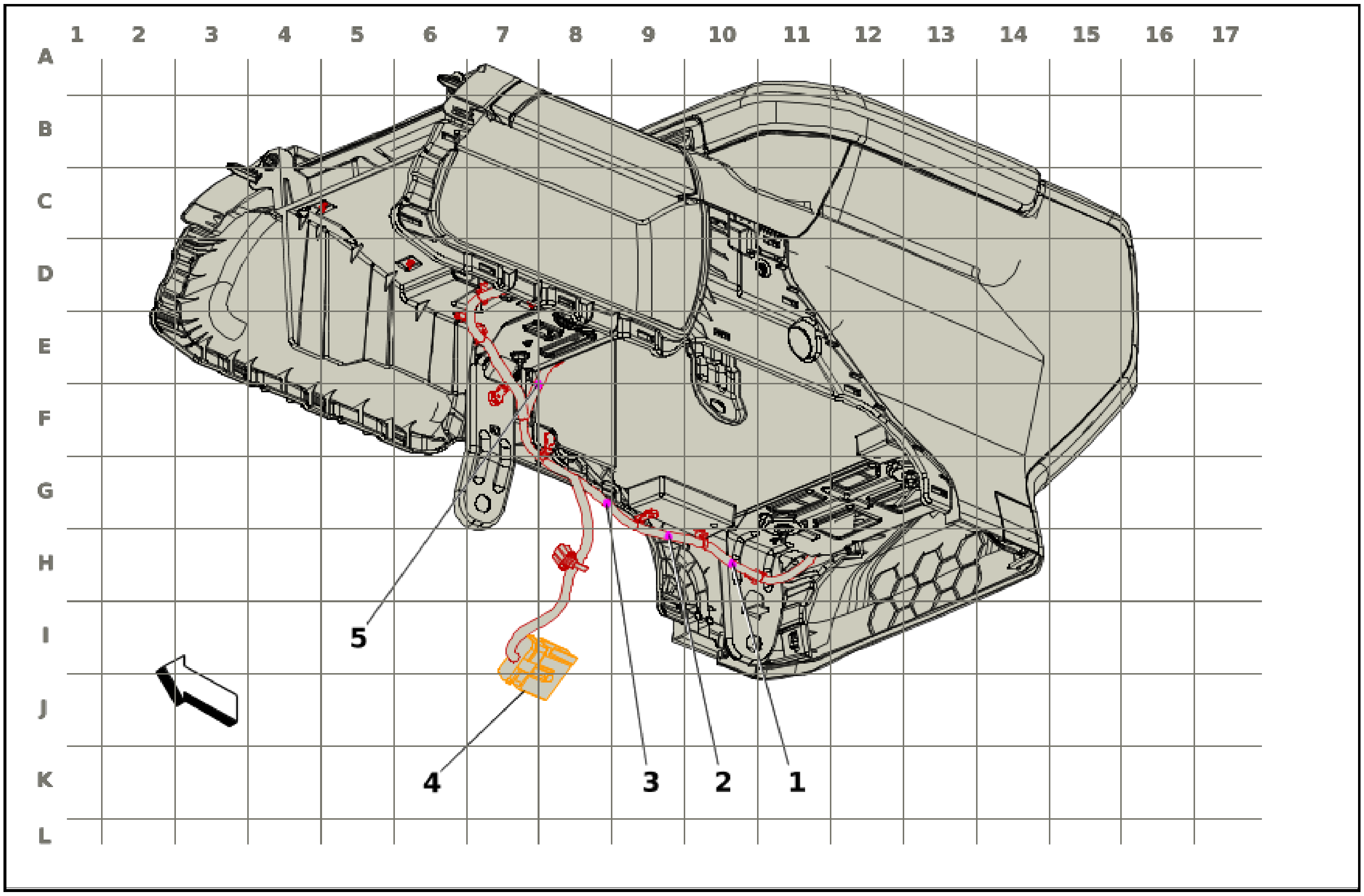
5254395

Items

(1)	X211 Instrument Panel Harness to Body Harness
(2)	X209 Body Harness to Instrument Panel Harness (UQA)

Harness Routing Views (Center Console Harness Routing)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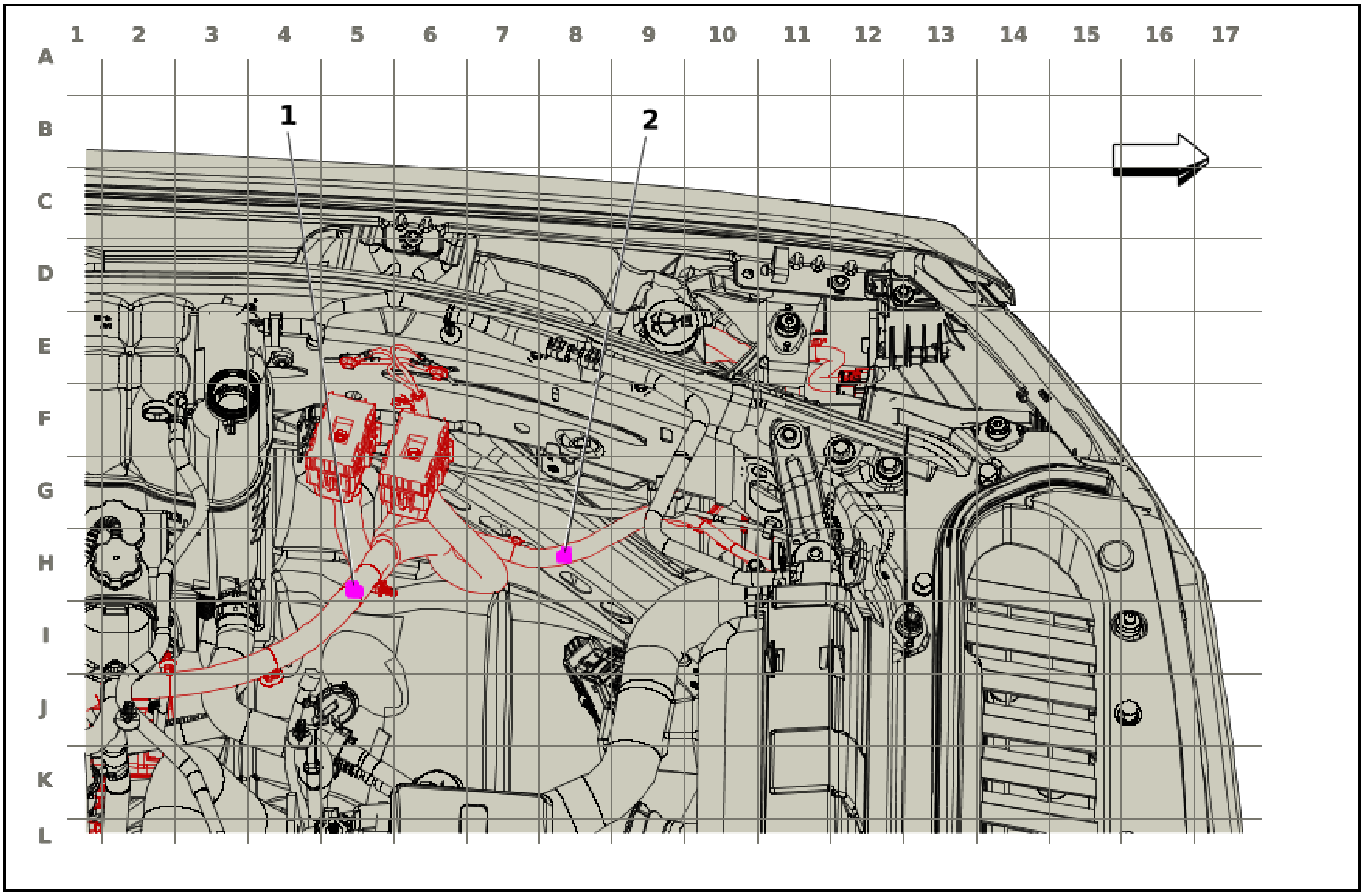
5277803

Items

(1)	J347 Flooe Console Harness
(2)	J313 Floor Console Harness
(3)	J357 Flooe Console Harness (D07)
(4)	X348 Body Harness to Floor Console Harness
(5)	J358 Body Harness (KA6)

Harness Routing Views (Body Harness Routing - Left Side Engine Compartment)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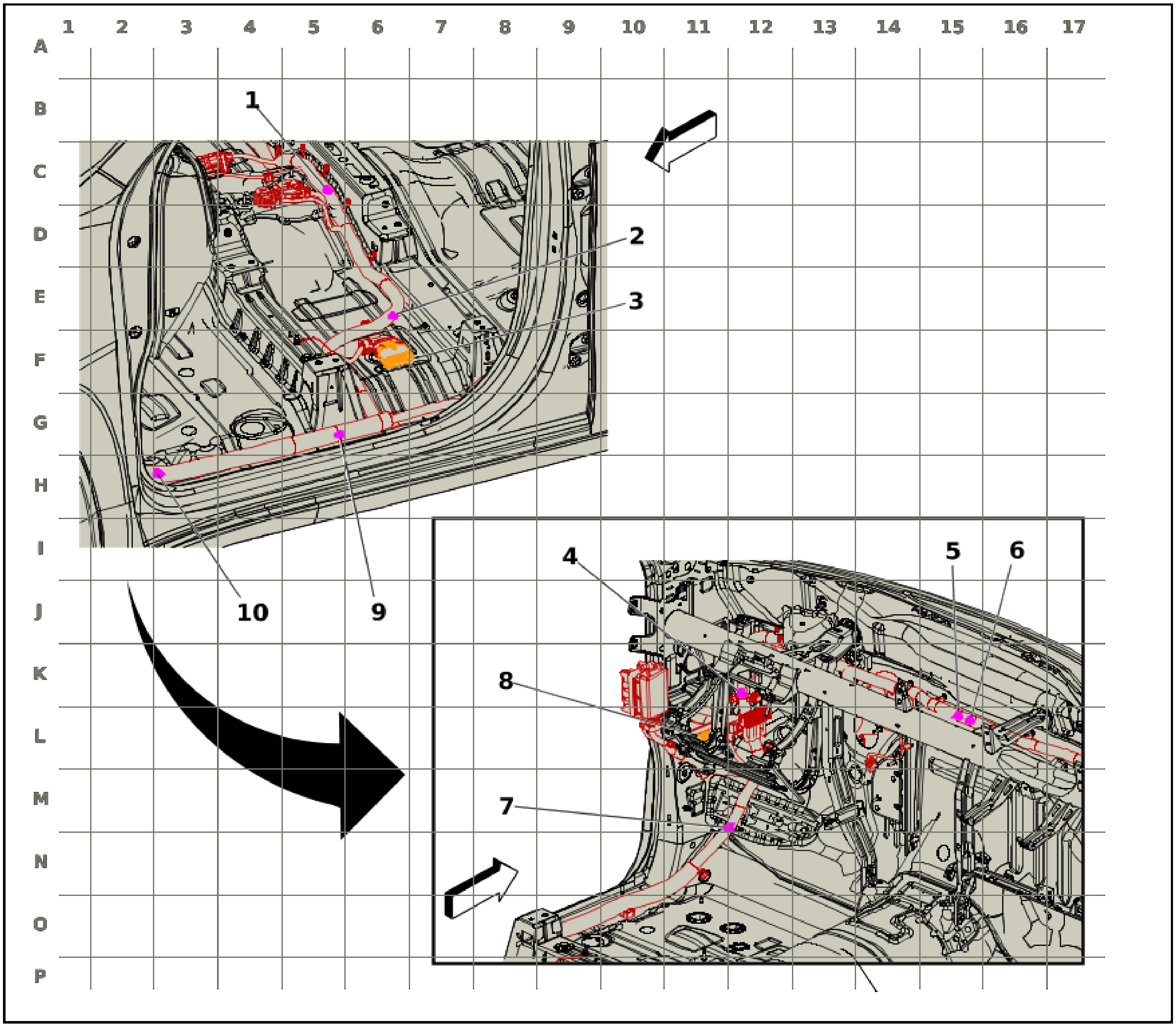
5286791

Items

(1)	J148 Body Harness (JL1)
(2)	J117 Body Harness

Harness Routing Views (Body Harness Routing - Left Front Passenger Compartment)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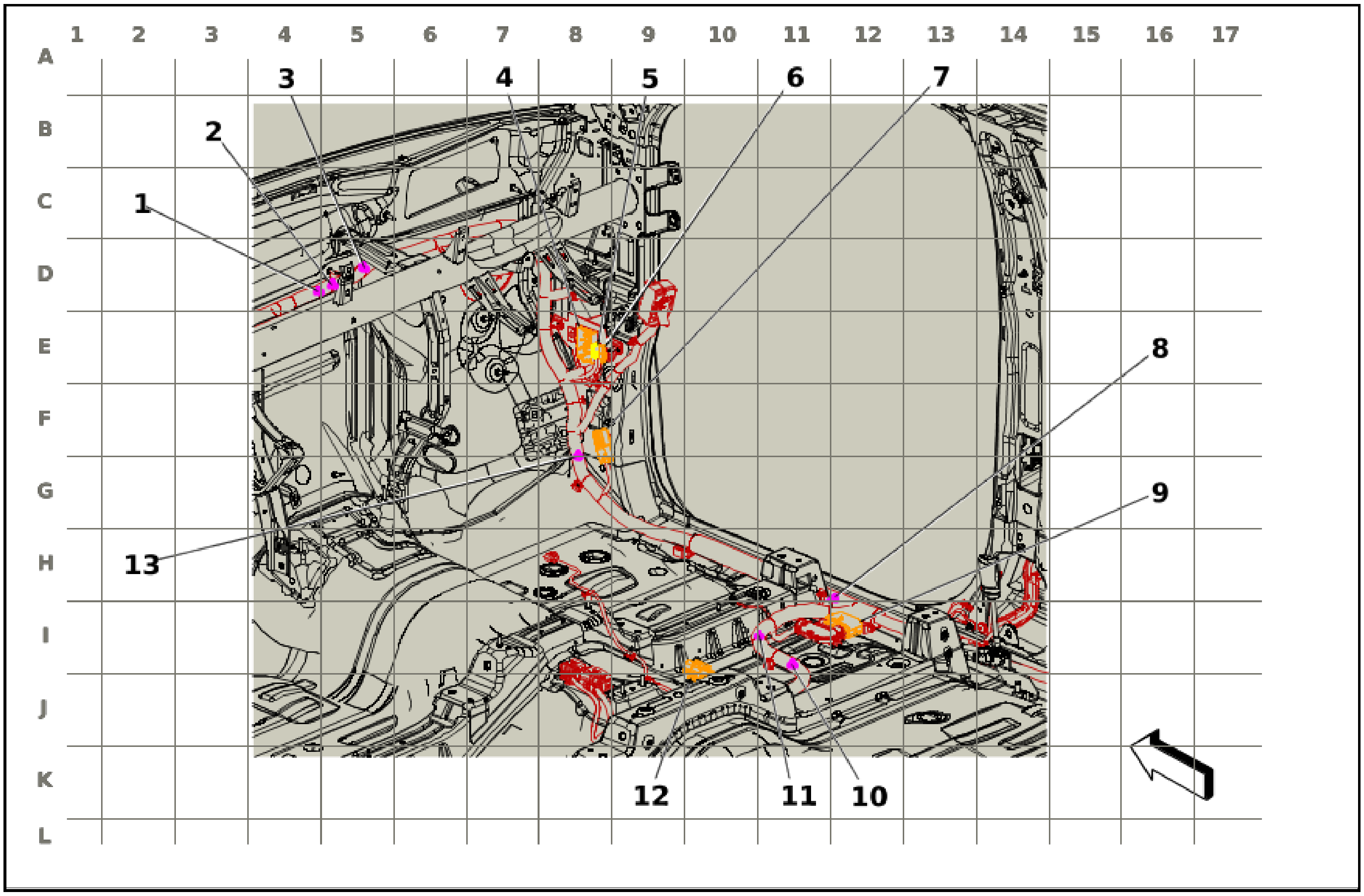
5286103

Items

(1)	J356 Body Harness (AU4)
(2)	J346 Body Harness
(3)	X310 Driver Seat Harness to Body Harness
(4)	J219 Body Harness
(5)	J227 Body Harness (AU3)
(6)	J226 Body Harness
(7)	J309 Body Harness
(8)	X225 Instrument Panel Harness to Body Harness
(9)	J312 Body Harness
(10)	J311 Body Harness

Harness Routing Views (Body Harness Routing - Right Front Passenger Compartment)

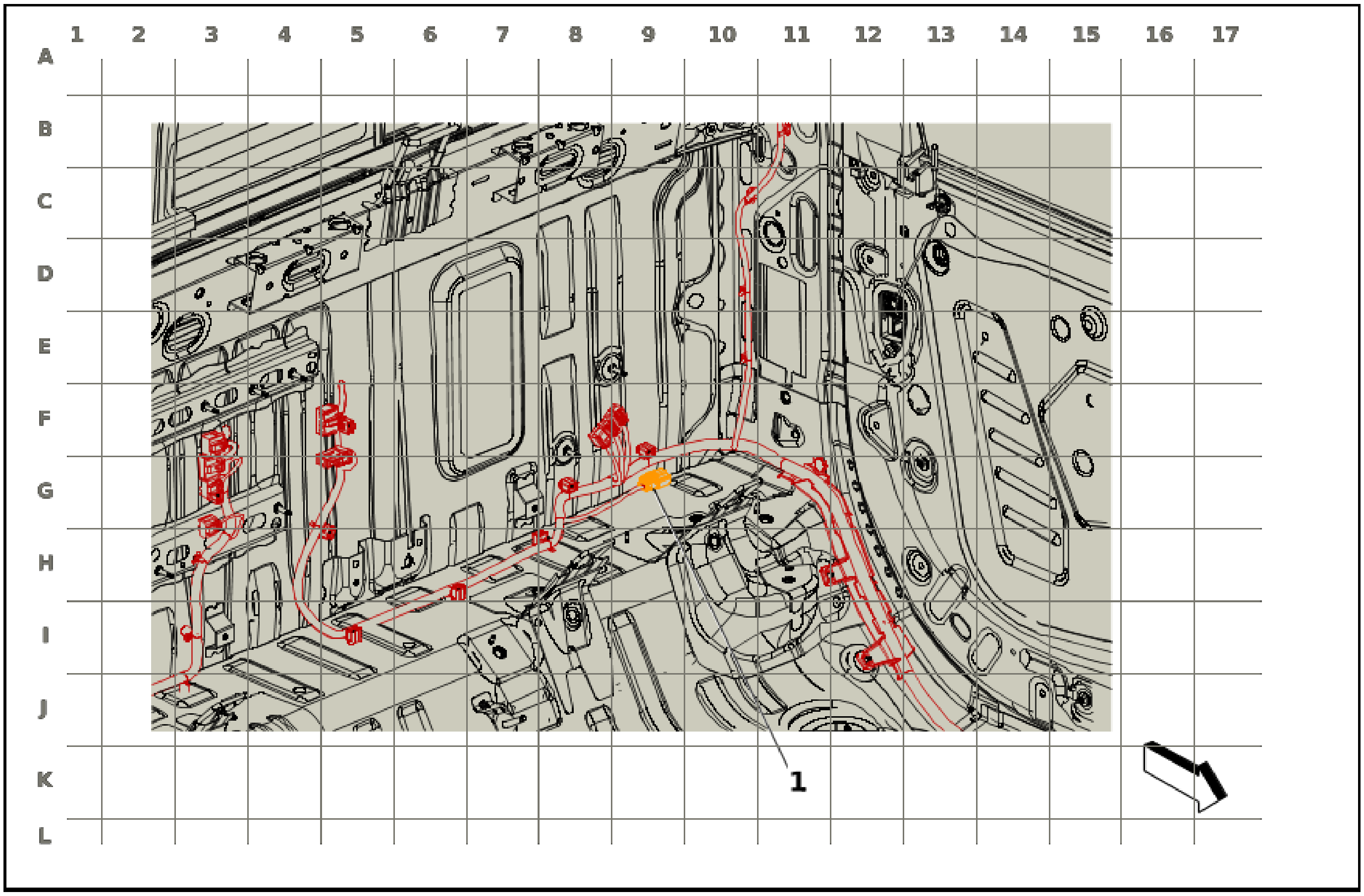


5286104

Items

(1)	J231 Body Harness (KI4/KI5)
(2)	J232 Body Harness
(3)	J233 Body Harness (K4B)
(4)	X275 Instrument Panel Harness to Body Harness
(5)	X209 Body Harness to Instrument Panel Harness (UQA)
(6)	X211 Instrument Panel Harness to Body Harness
(7)	X230 Auxiliary Heater Jumper Harness to Body Harness (C32)
(8)	J322 Body Harness (UVI/UVS+UQA)
(9)	X320 Passenger Seat Harness to Body Harness
(10)	J358 Body Harness (KA6)
(11)	J314 Body Harness
(12)	X348 Body Harness to Floor Console Harness
(13)	J320 Body Harness

Harness Routing Views (Body Harness Routing - Left Rear Passenger Compartment (1 of 2))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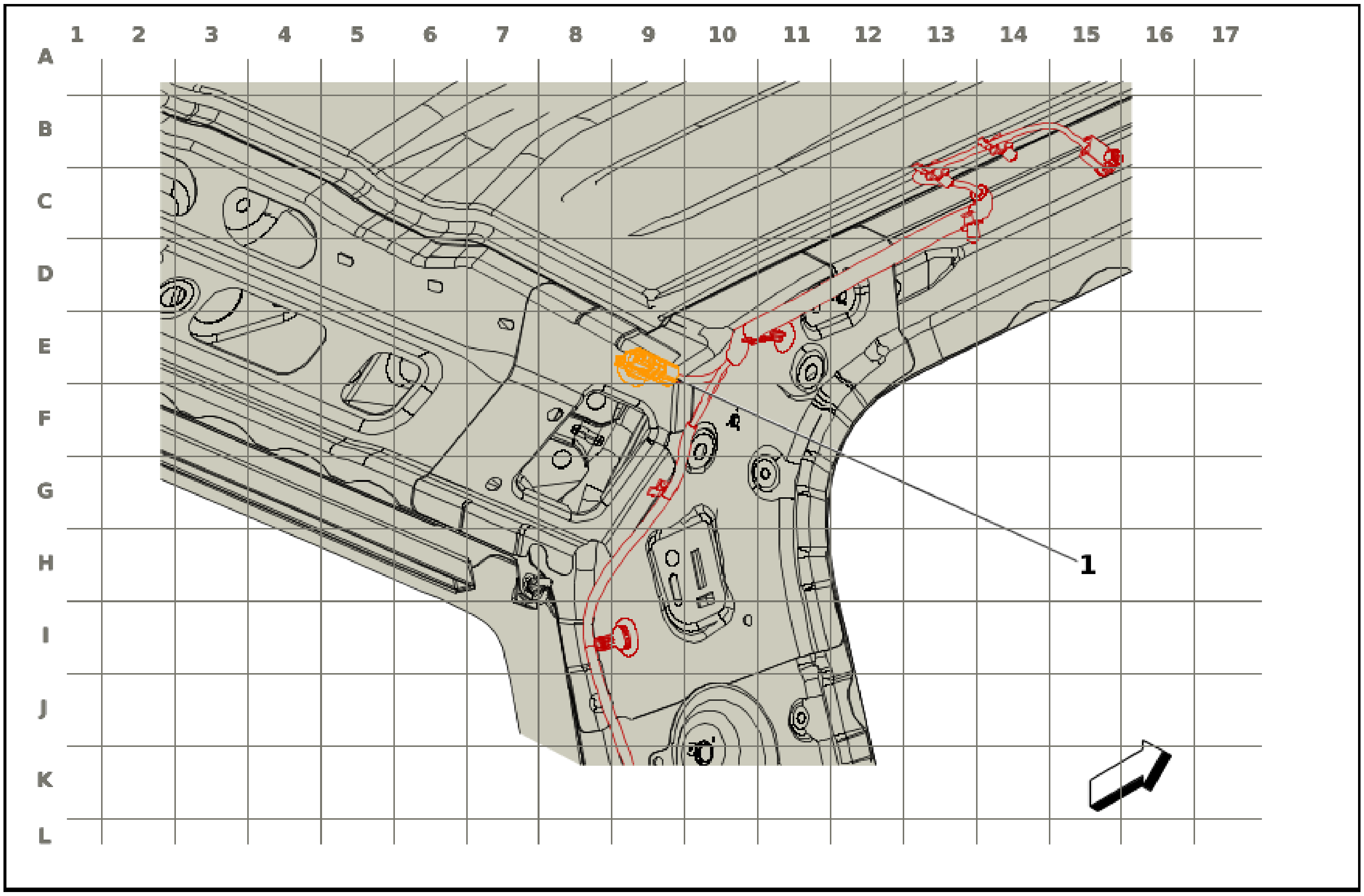
5279359

Items

(1)	X370 Body Harness to Rear Seat Harness (KA6)

Harness Routing Views (Body Harness Routing - Left Rear Passenger Compartment (2 of 2))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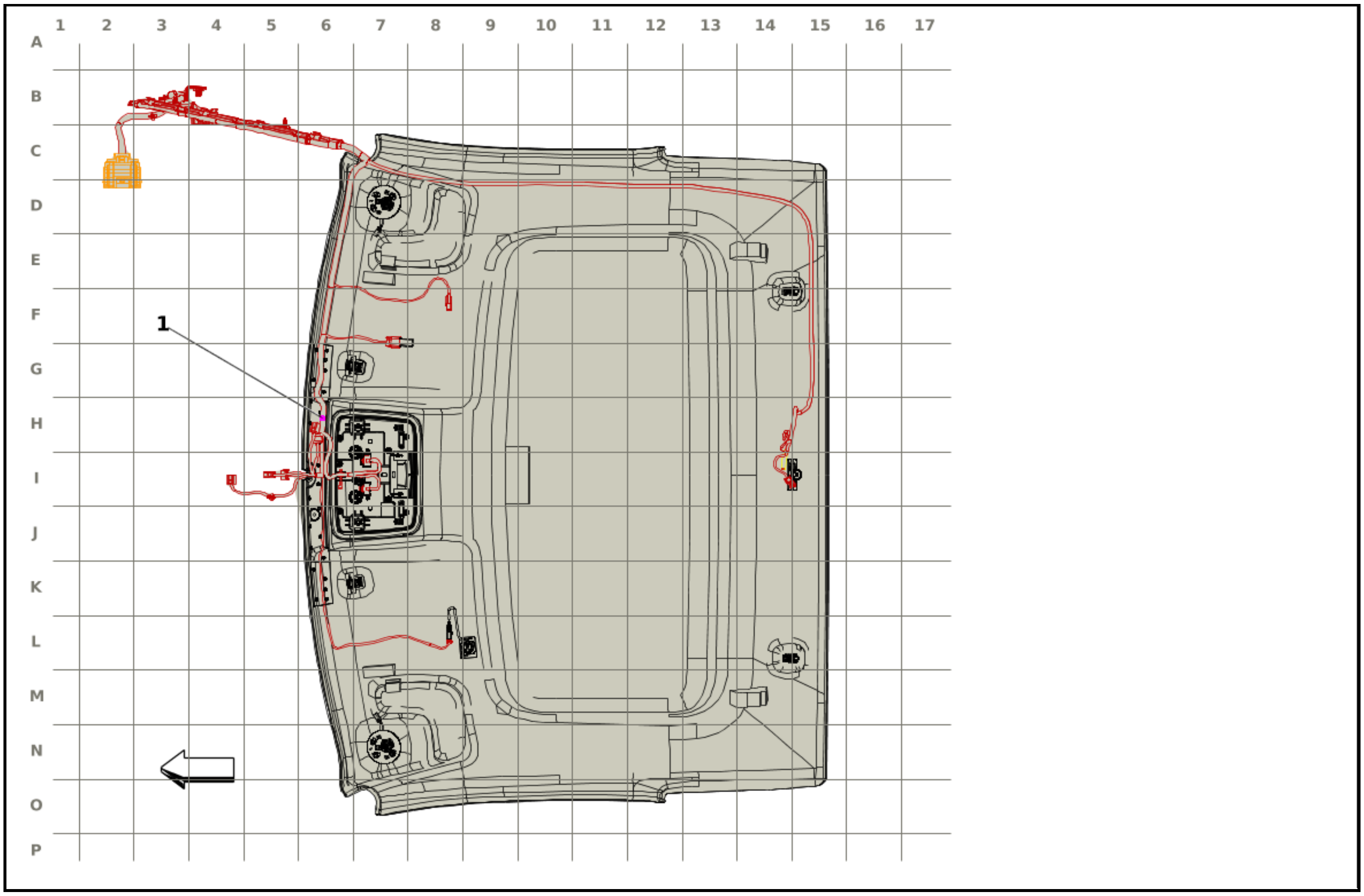
5279362

Items

(1) X309 Body Harness to Rear Cargo Camera Harness (UVN)

Harness Routing Views (Headliner Harness Routing (Regular Cab))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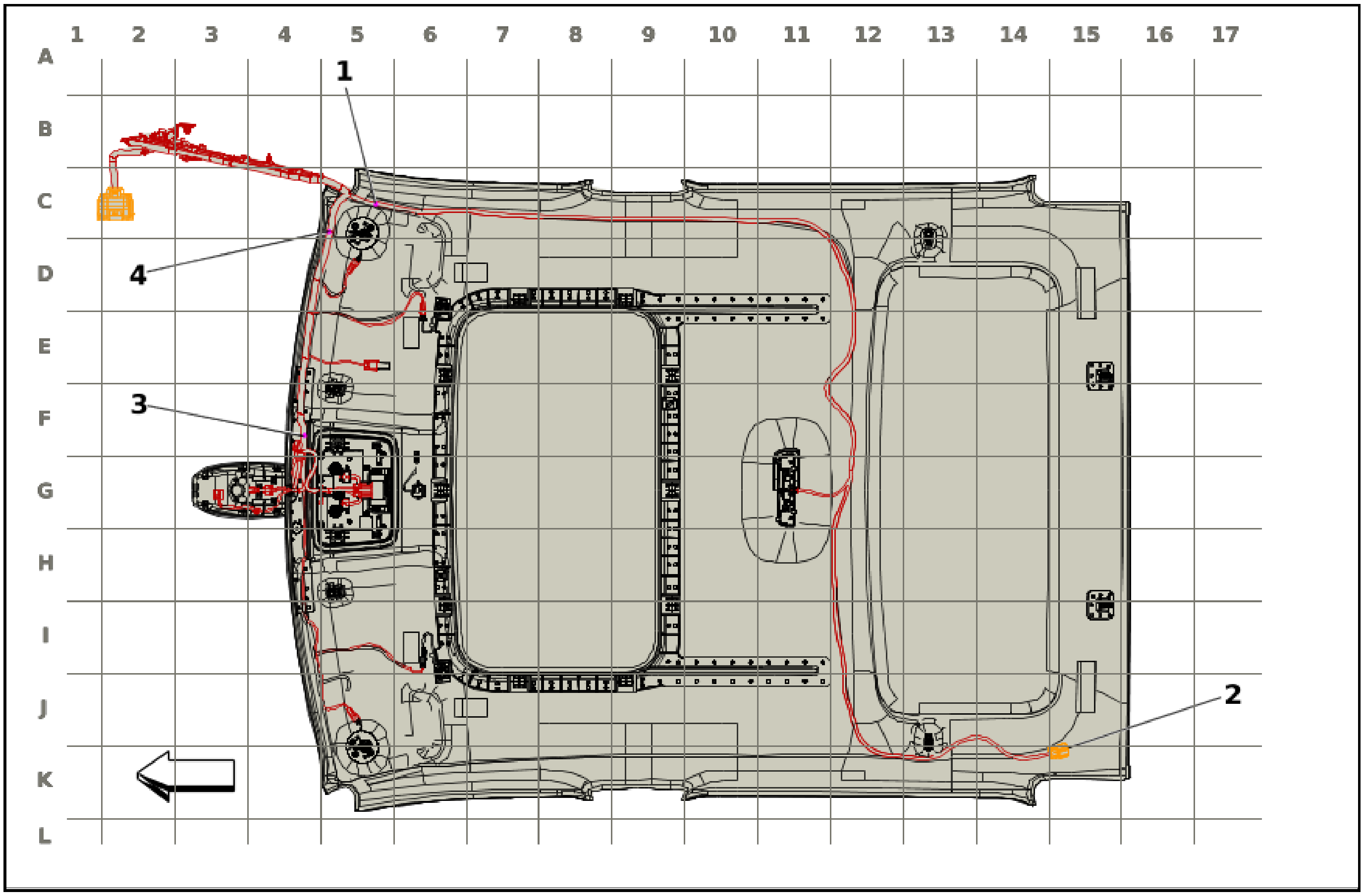
5370370

Items

(1) J319 Headliner Harness (UEU/DD8/DRZ)

Harness Routing Views (Headliner Harness Routing (Crew/Extended Cab))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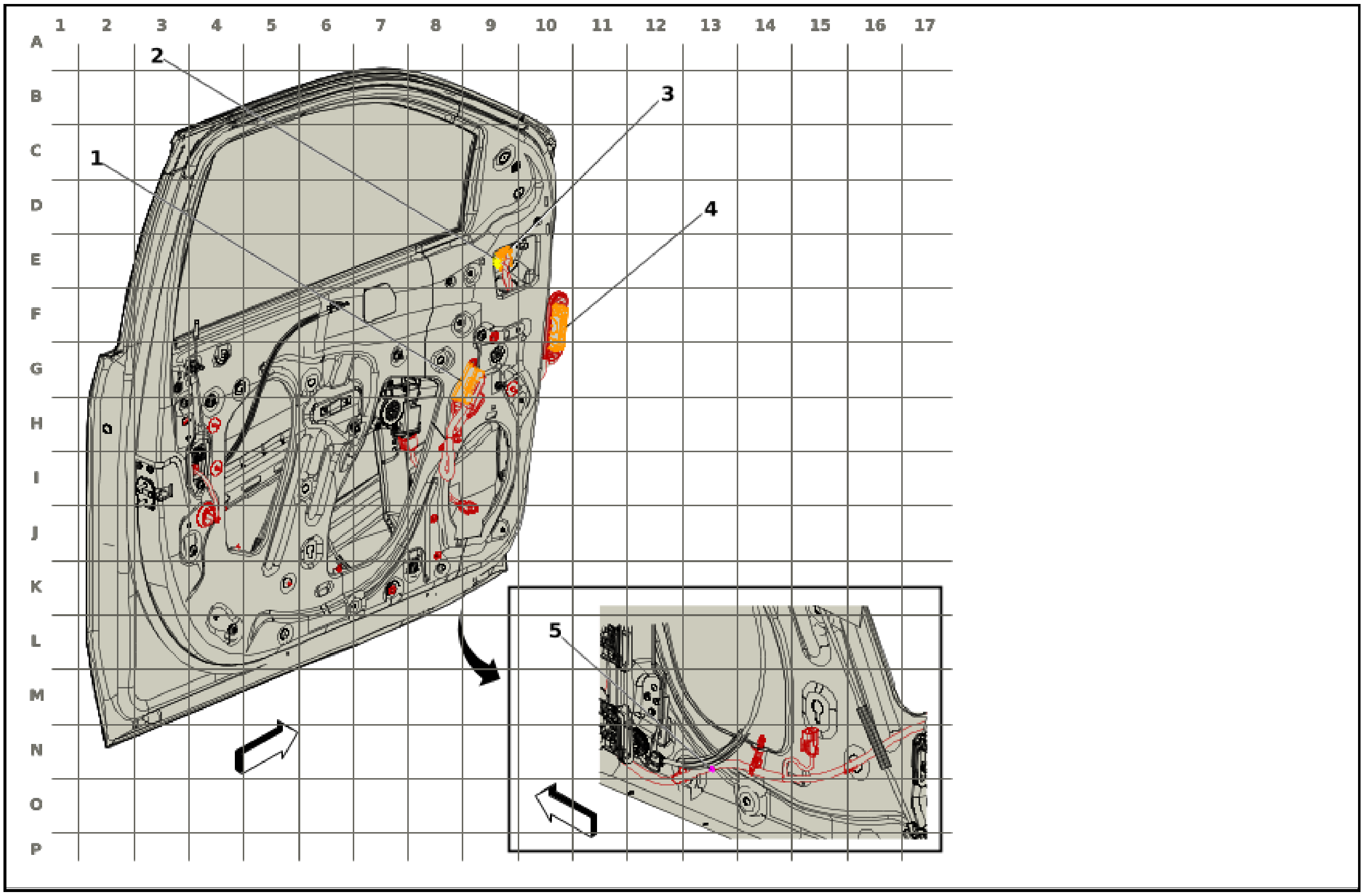
5370371

Items

(1)	J328 Headliner Harness (Crew/ Extended Cab)
(2)	X380 Center High Mount Stop Lamp Jumper Harness to Headliner Harness (Extended Cab/Crew Cab)
(3)	J319 Headliner Harness (UEU/DD8/DRZ)
(4)	J327 Headliner Harness (DH6)

Harness Routing Views (Door Harness Routing - Driver)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5241094

Items

(1) X505 Driver Door Harness to Driver Door Trim Harness

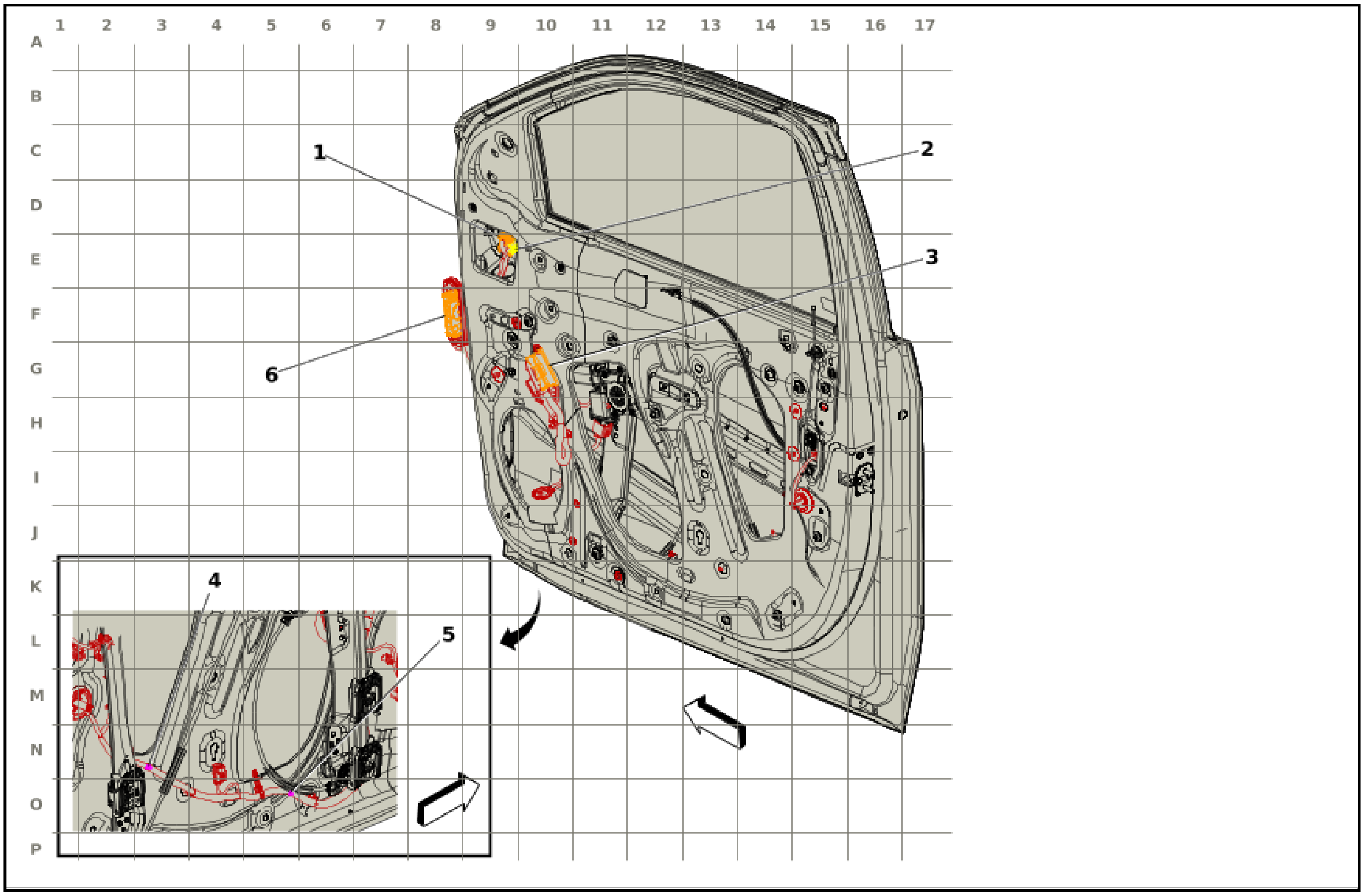
(2) X511 Driver Door Harness to Outside Rearview Mirror Harness (DZC)

(3) X510 Driver Door Harness to Outside Rearview Mirror Harness

(4) X500 Driver Door Harness to Body Harness

(5) J501 Driver Door Harness

Harness Routing Views (Door Harness Routing - Passenger)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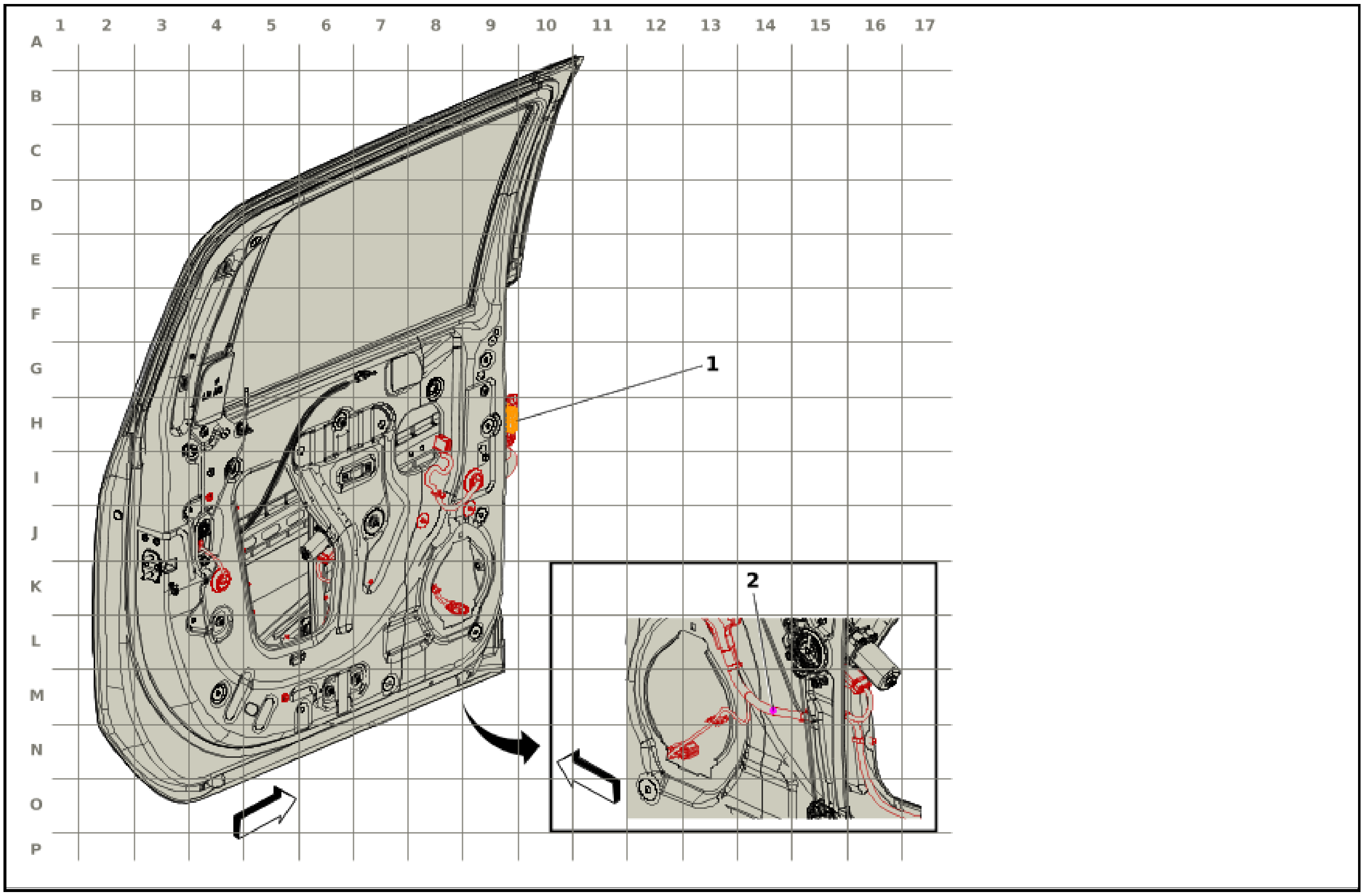
5241103

Items

(1)	X610 Passenger Door Harness to Outside Rearview Mirror Harness
(2)	X611 Passenger Door Harness to Outside Rearview Mirror Harness (DZC)
(3)	X605 Passenger Door Harness to Passenger Door Trim Harness
(4)	J603 Passenger Door Harness
(5)	J601 Passenger Door Harness
(6)	X600 Passenger Door Harness to Body Harness

Harness Routing Views (Door Harness Routing - Left Rear (Crew/Extended Cab))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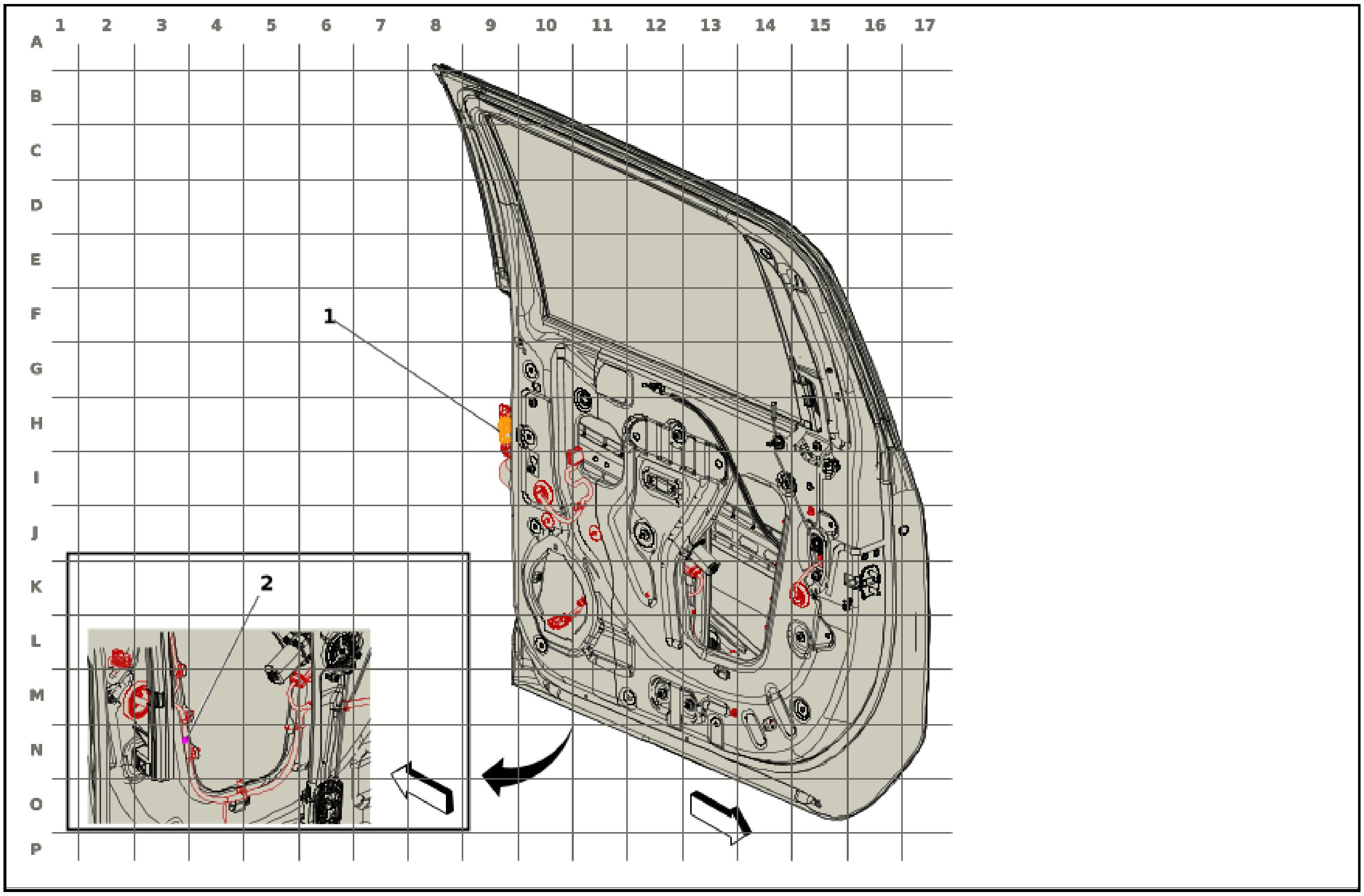
5241106

Items

(1)	X700 Left Rear Door Harness to Body Harness (Extended Cab/Crew Cab)
(2)	J701 Left Raer Door Harness

Harness Routing Views (Door Harness Routing - Right Rear (Crew/Extended Cab))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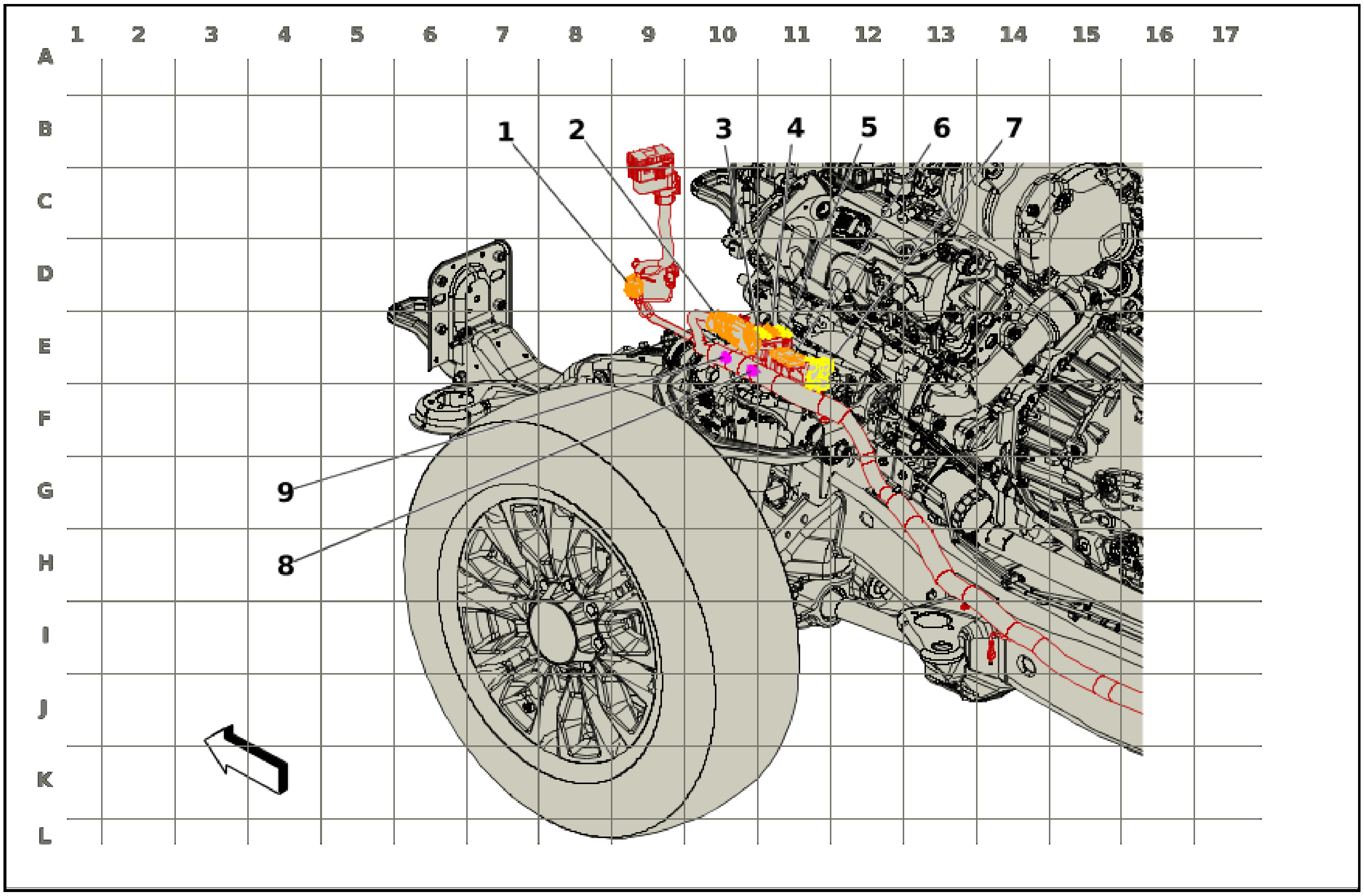
5241109

Items

(1)	X800 Right Rear Door Harness to Body Harness (Extended Cab/Crew Cab)
(2)	J801 Right Rear Door Harness

Harness Routing Views (Chassis Harness Routing - Left Front)

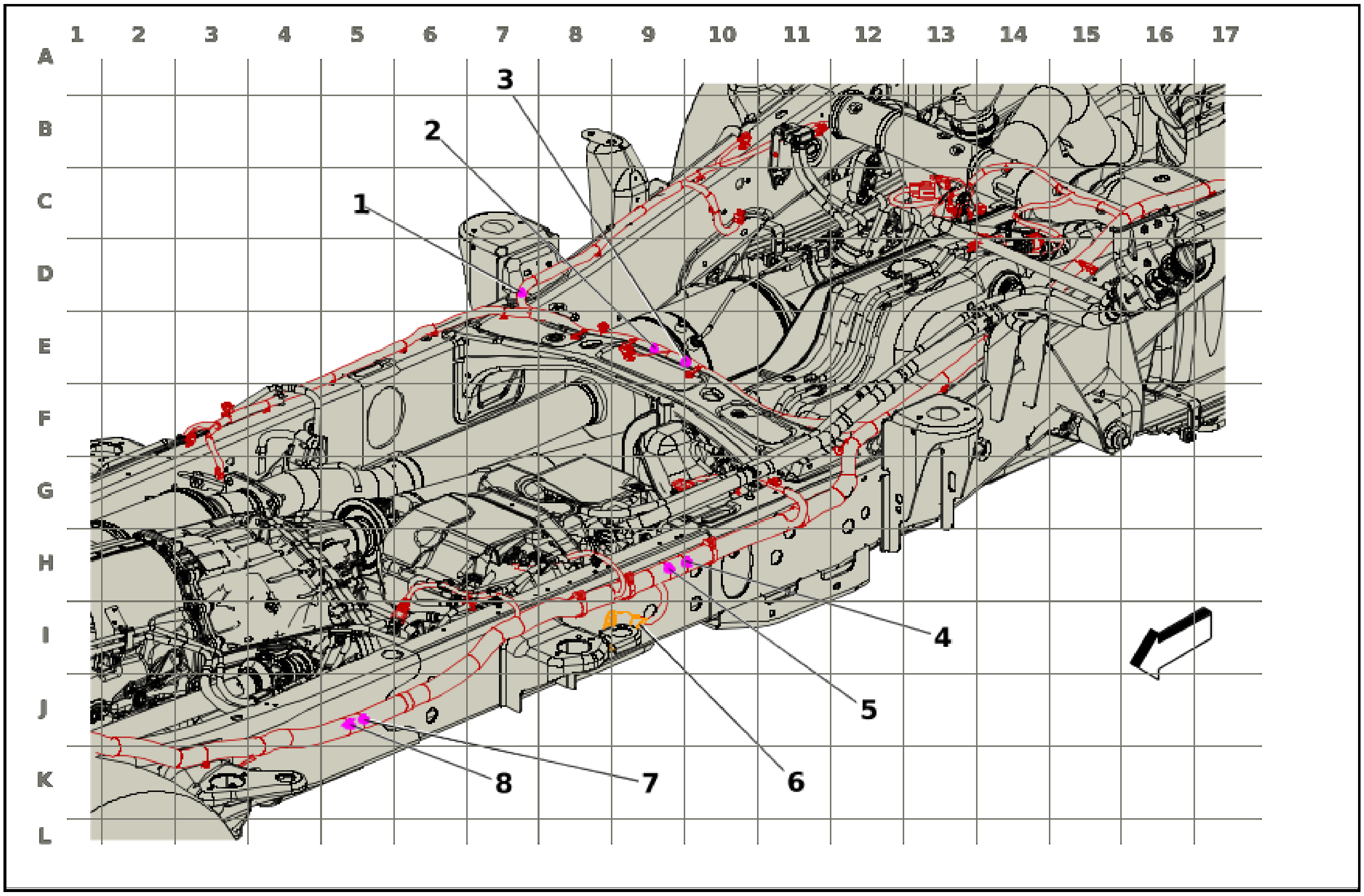


5275640

Items

(1)	X103 Chassis Harness to Chassis Harness (L8T)
(2)	X140 Body Harness to Chassis Harness
(3)	X208 Body Harness to Chassis Harness (UVS/UVI)
(4)	X229 Body Harness to Body Harness (UVI/UVS) (UVI/UVS)
(5)	X228 Chassis Harness to Body Harness (UVI/UVS)
(6)	X138 Body Harness to Chassis Harness
(7)	X171 Chassis Harness to Engine Harness
(8)	J150 Chassis Harness (JL1)
(9)	J151 Chassis Harness

Harness Routing Views (Chassis Harness Routing - Left Middle)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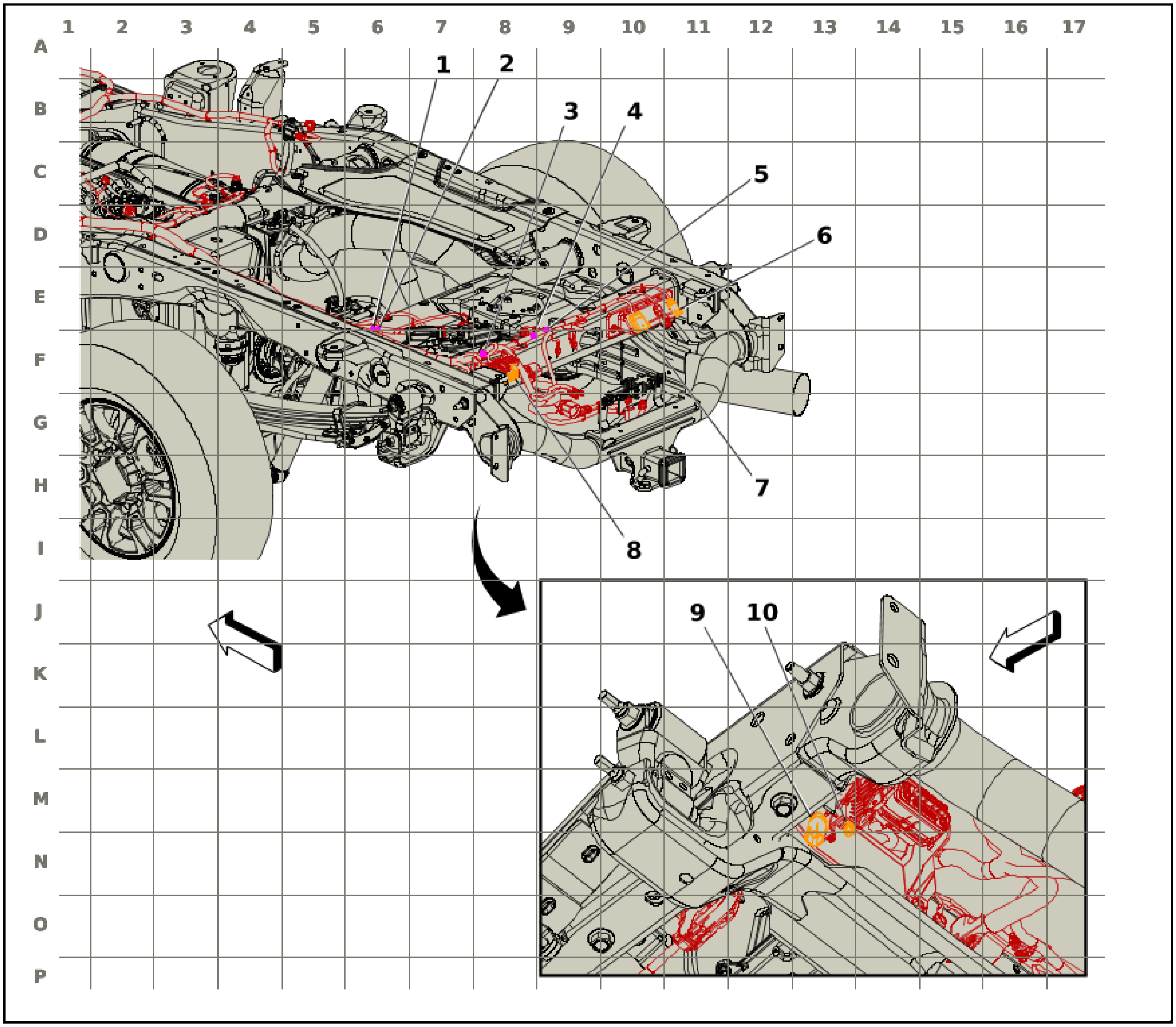
5275641

Items

(1)	J360 Chassis Harness (L5P)
(2)	J364 Chassis Harness (L5P)
(3)	J363 Chassis Harness (L5P)
(4)	J361 Chassis Harness (L5P)
(5)	J308 Chassis Harness (L5P)
(6)	X302 Diesel Exhaust Fluid Jumper Harness to Chassis Harness (L5P)
(7)	J362 Chassis Harness (L5P)
(8)	J359 Chassis Harness (L5P)

Harness Routing Views (Chassis Harness Routing - Left Rear)

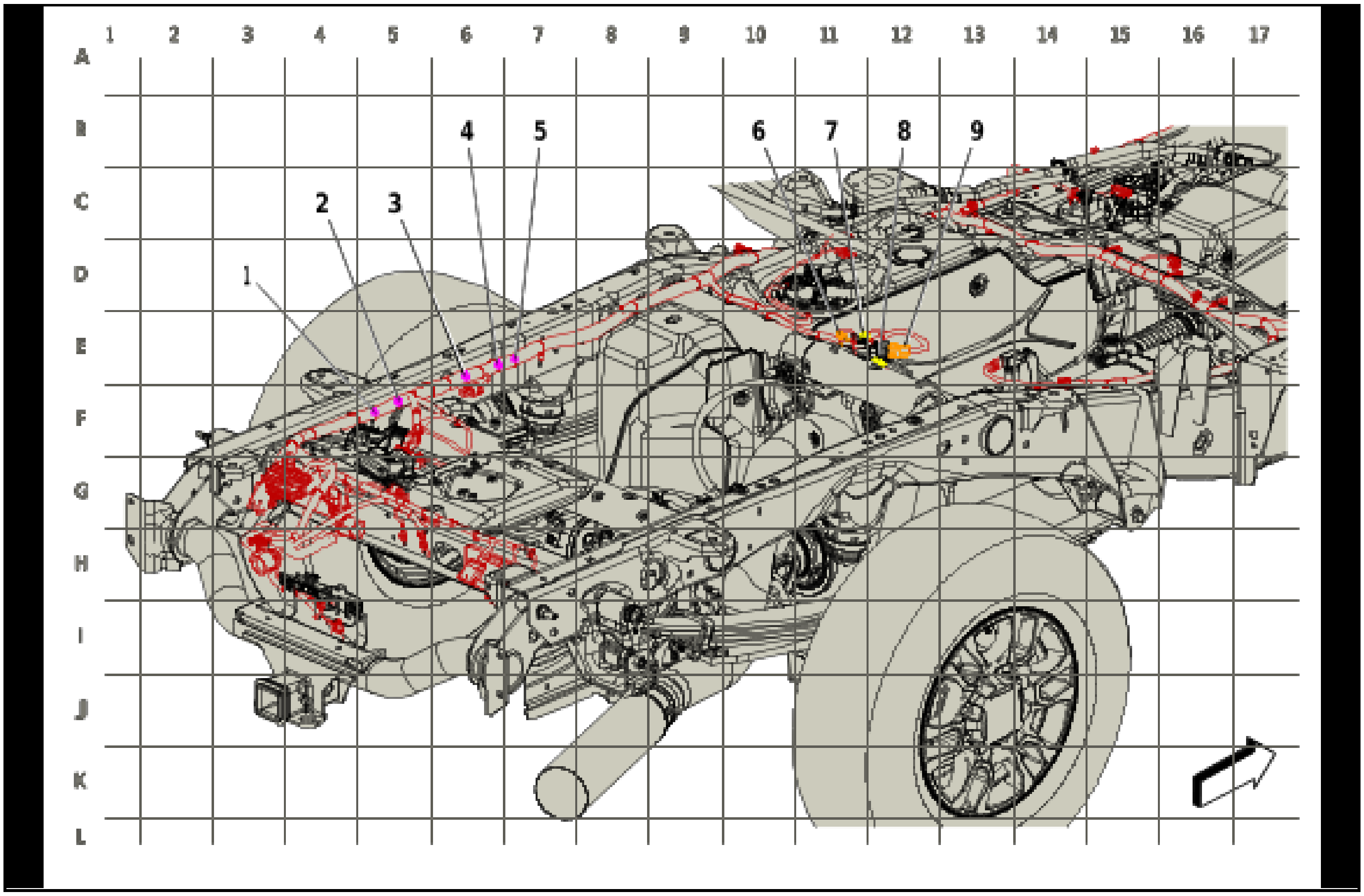


5275642

Items

(1)	J302 Chassis Harness
(2)	J303 Chassis Harness
(3)	J316 Chassis Harness
(4)	J318 Chassis Harness
(5)	J325 Chassis Harness (UF2)
(6)	X420 Right Tail Lamp Assembly Harness to Chassis Harness
(7)	X401 Rear Fascia Harness to Chassis Harness
(8)	X926 Rearview Camera Harness to Chassis Harness (QK2/QT5)
(9)	X410 Left Tail Lamp Assembly Harness to Chassis Harness
(10)	X905 Chassis Harness to Endgate Harness (UV2/UVB/UVI)

Harness Routing Views (Chassis Harness Routing - Right Rear)

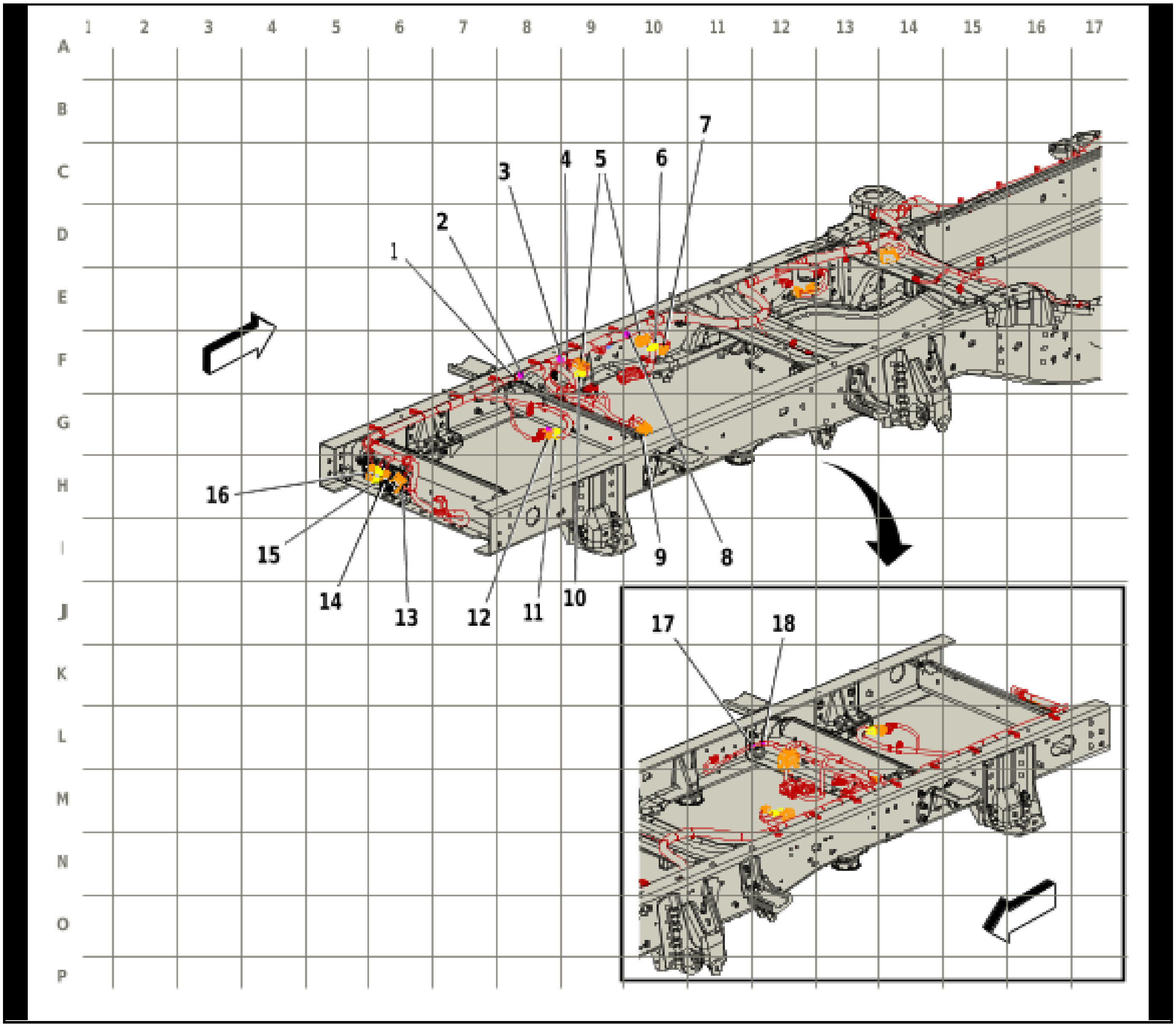


5275643

Items

(1)	J304 Chassis Harness
(2)	J317 Chassis Harness
(3)	J301 Chassis Harness (UD1/JL1)
(4)	J353 Chassis Harness
(5)	J351 Chassis Harness
(6)	X407 Chassis Harness to Right Rear Speed Sensor Harness
(7)	X440 Rear Axle Harness to Chassis Harness
(8)	X406 Chassis Harness to Left Rear Speed Sensor Harness
(9)	X417 Rear Axle Harness to Chassis Harness

Harness Routing Views (Chassis Harness Routing - Rear (Chassis Cab))



5370363

Items

(1) J302 Chassis Harness

(2) J304 Chassis Harness

(3) J303 Chassis Harness

(4) J316 Chassis Harness

(5) X417 Rear Axle Harness to Chassis Harness

(6) X440 Rear Axle Harness to Chassis Harness

(7) X406 Chassis Harness to Left Rear Speed Sensor Harness

(8) J317 Chassis Harness

(9) X351 Chassis Harness to Fuel Tank Jumper Harness (L5P)

(10) X407 Chassis Harness to Right Rear Speed Sensor Harness

(11) X411 Chassis Harness to Rear Fuel Tank Harness (L8T+N2N)

(12) X414 Chassis Harness to Rear Fuel Tank Harness (L5P+N2N)

(13) X401 Rear Fascia Harness to Chassis Harness

(14) X927 Rearview Camera Harness to Chassis Harness (Chassis Cab)

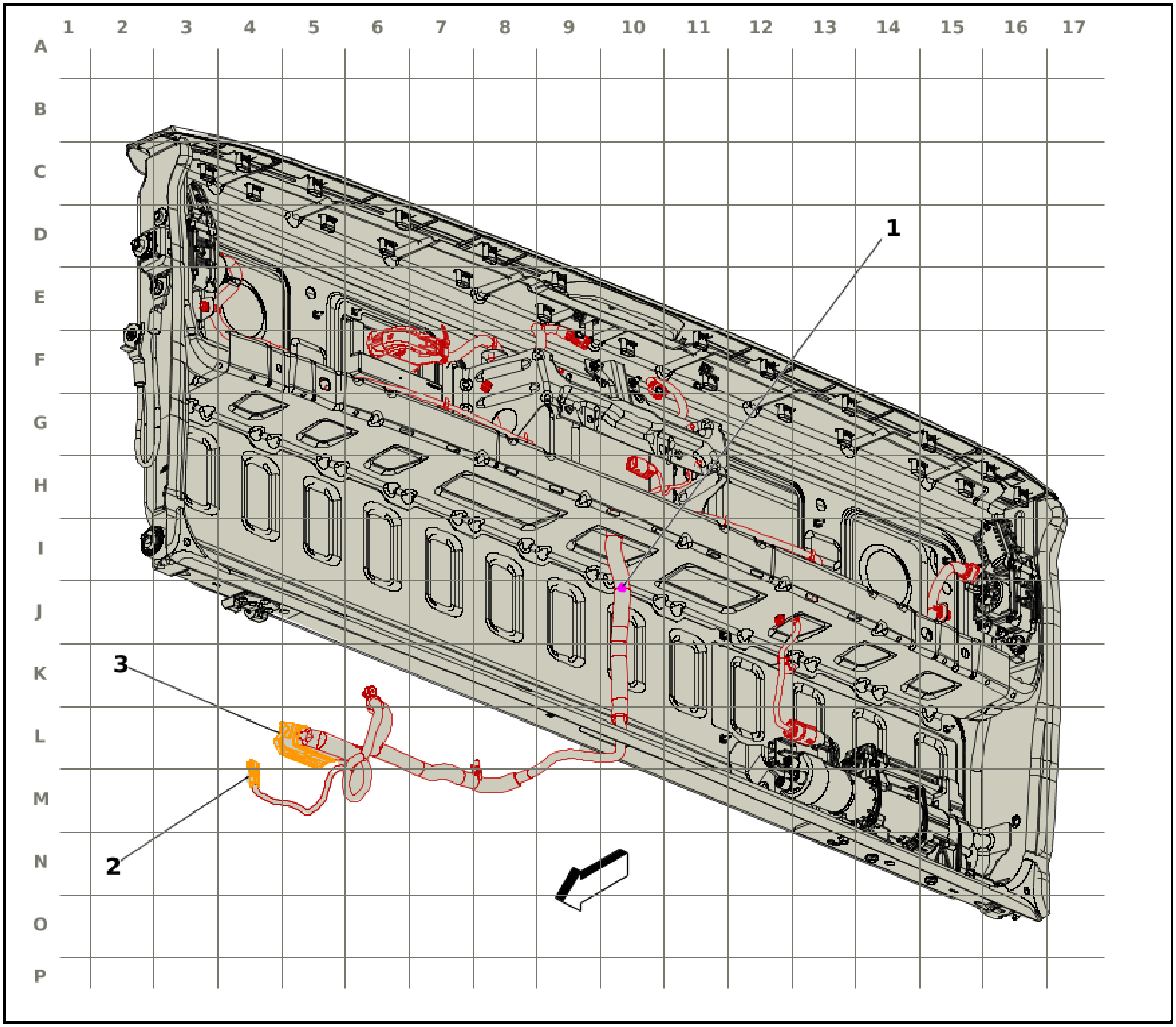
(15) X420 Right Tail Lamp Assembly Harness to Chassis Harness

(16) X410 Left Tail Lamp Assembly Harness to Chassis Harness

(17) J363 Chassis Harness (L5P)

(18) J364 Chassis Harness (L5P)

Harness Routing Views (Endgate Harness Routing (X88))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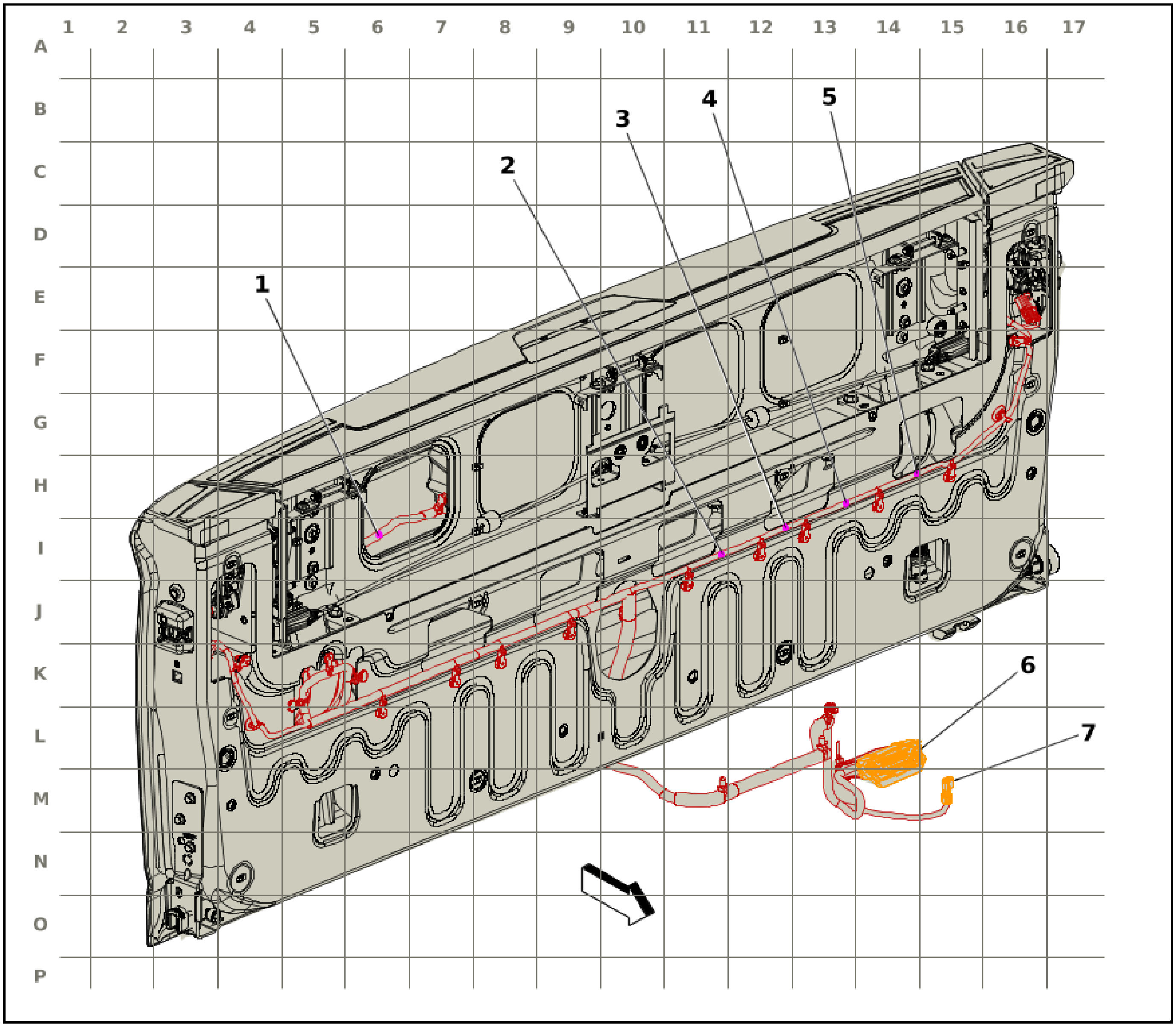
5236890

Items

(1)	J904 Endgate Harness
(2)	X905 Chassis Harness to Endgate Harness (UV2/UVB/UVI)
(3)	X926 Rearview Camera Harness to Chassis Harness (QK2/QT5)

Harness Routing Views (Endgate Harness Routing (Z88))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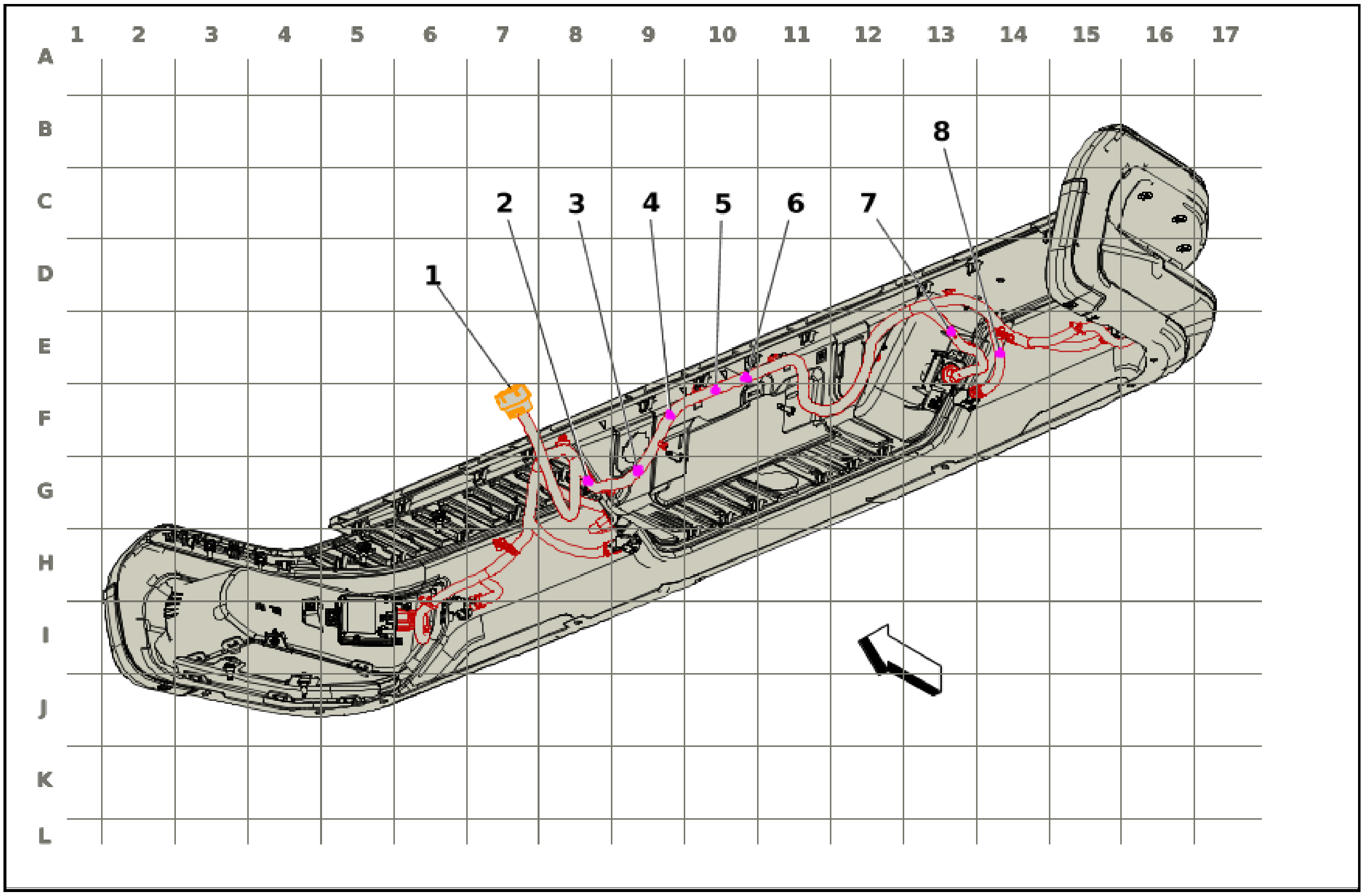
5236891

Items

(1)	J904 Endgate Harness
(2)	J902 Endgate Harness (QK1/QK2)
(3)	J903 Endgate Harness (QK1/QK3)
(4)	J905 Endgate Harness (QK2/QT5)
(5)	J901 Endgate Harness (QK2/QT5)
(6)	X926 Rearview Camera Harness to Chassis Harness (QK2/QT5)
(7)	X905 Chassis Harness to Endgate Harness (UV2/UVB/UVI)

Harness Routing Views (Rear Bumper Harness Routing)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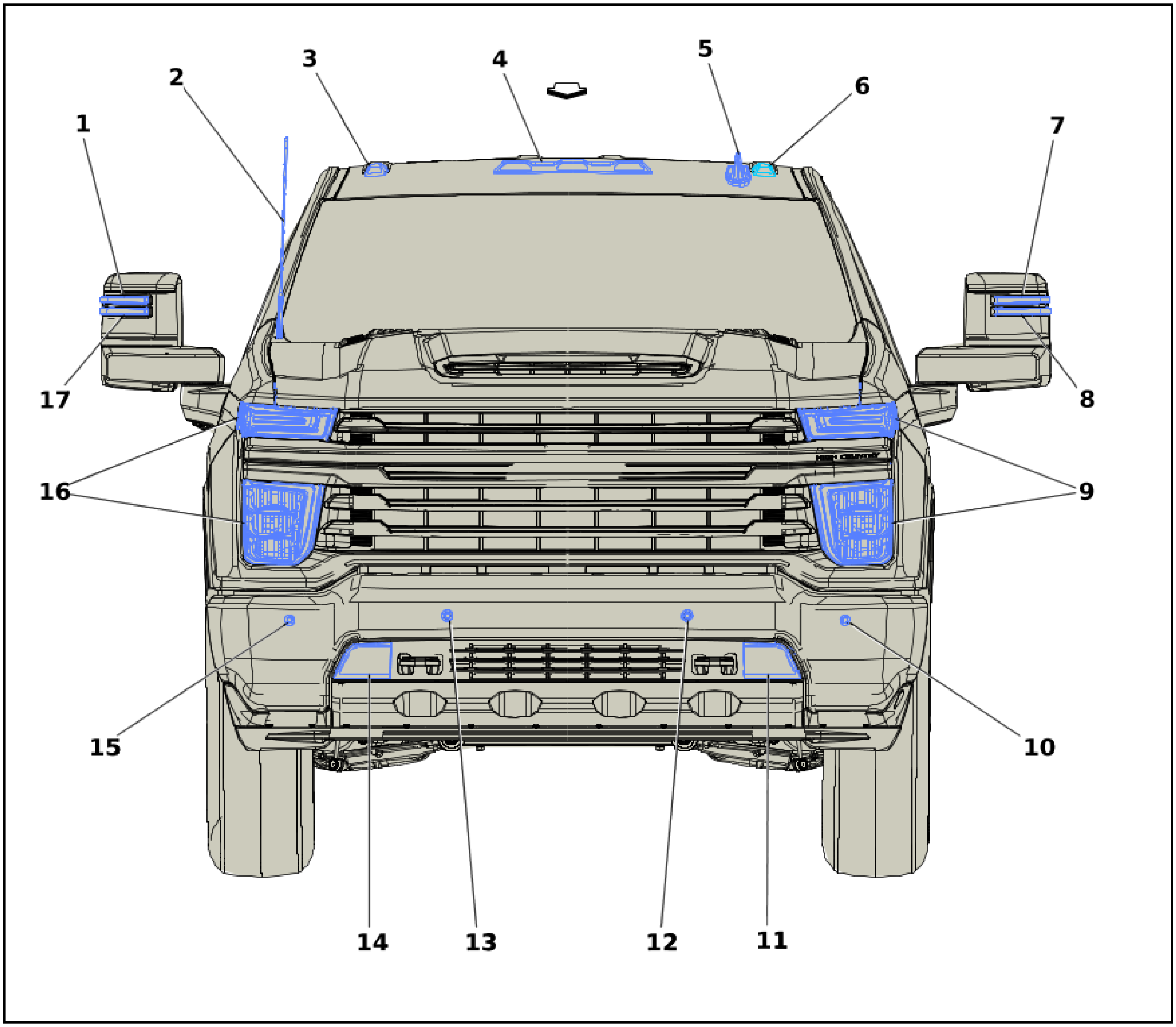
5236892

Component Locator

Front of Vehicle/Engine Compartment Component Views

Front of Vehicle Components (X88)



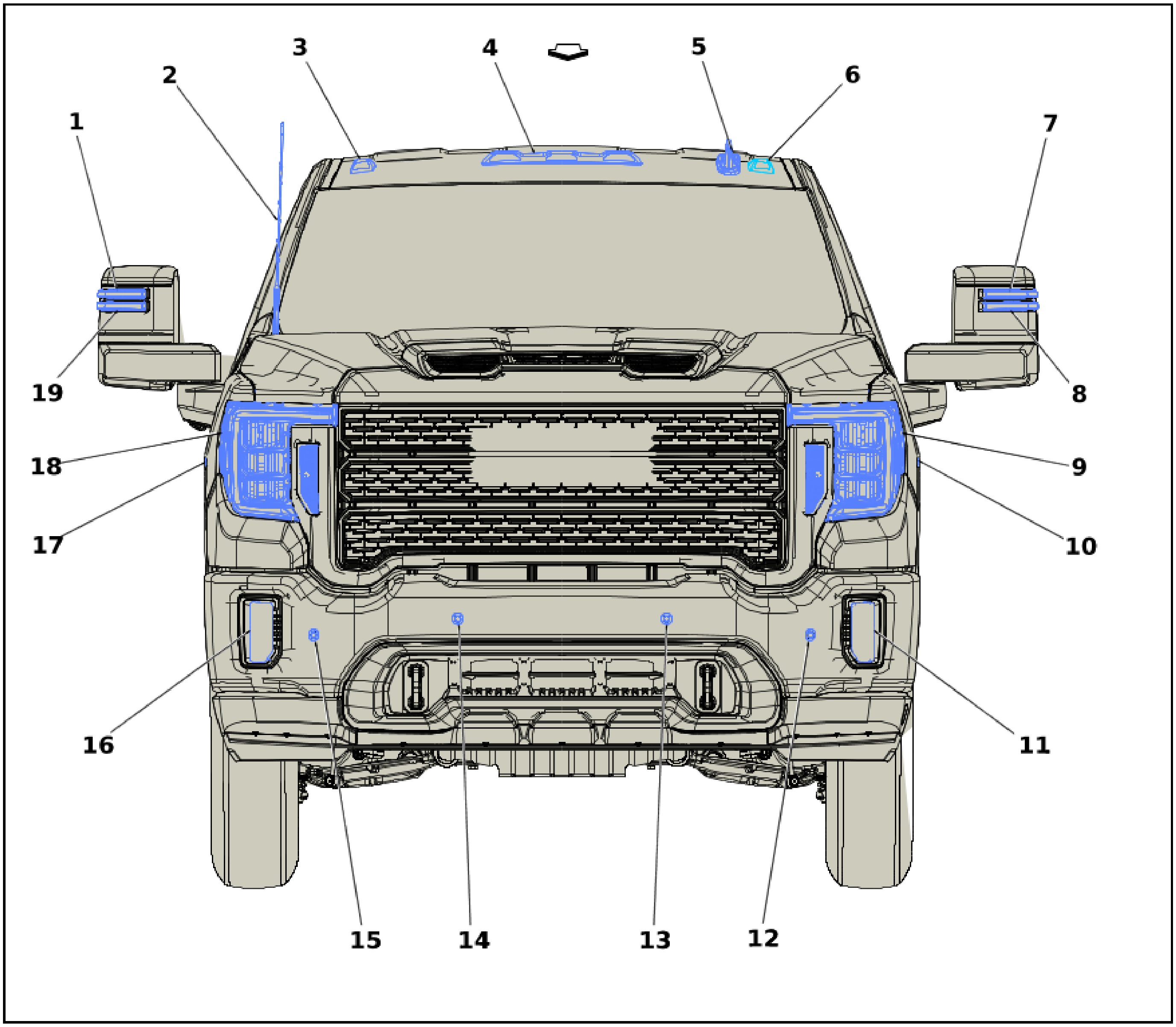
5236893

Items

(1)	E90DF Exterior Flood Lamp - Driver Outside Rearview Mirror Forward (DEZ/DLF)
(2)	T4M Radio Antenna
(3)	E3E Roof Clearance Lamp - Right Front Outer (U01)
(4)	E3C Roof Clearance Lamp - Front Middle (U01)
(5)	T4G Cellular Phone, Navigation, and Digital Radio Antenna
(6)	E3A Roof Clearance Lamp - Left Front Outer (U01)
(7)	E90PF Exterior Flood Lamp - Passenger Outside Rearview Mirror Forward (DEZ/DLF)
(8)	E2LM Side Marker Lamp - Left Middle
(9)	E13LA Headlamp Assembly - Left
(10)	B306A Parking Assist Sensor - Front Left Outer (UD5)
(11)	E29LF Fog Lamp - Left Front (T3U)
(12)	B306B Parking Assist Sensor - Front Left Middle (UD5)
(13)	B306C Parking Assist Sensor - Front Right Middle (UD5)

(14)	E29RF Fog Lamp - Right Front (T3U)
(15)	B306D Parking Assist Sensor - Front Right Outer (UD5)
(16)	E13RA Headlamp Assembly - Right
(17)	E2RM Side Marker Lamp - Right Middle

Front of Vehicle Components (Z88)



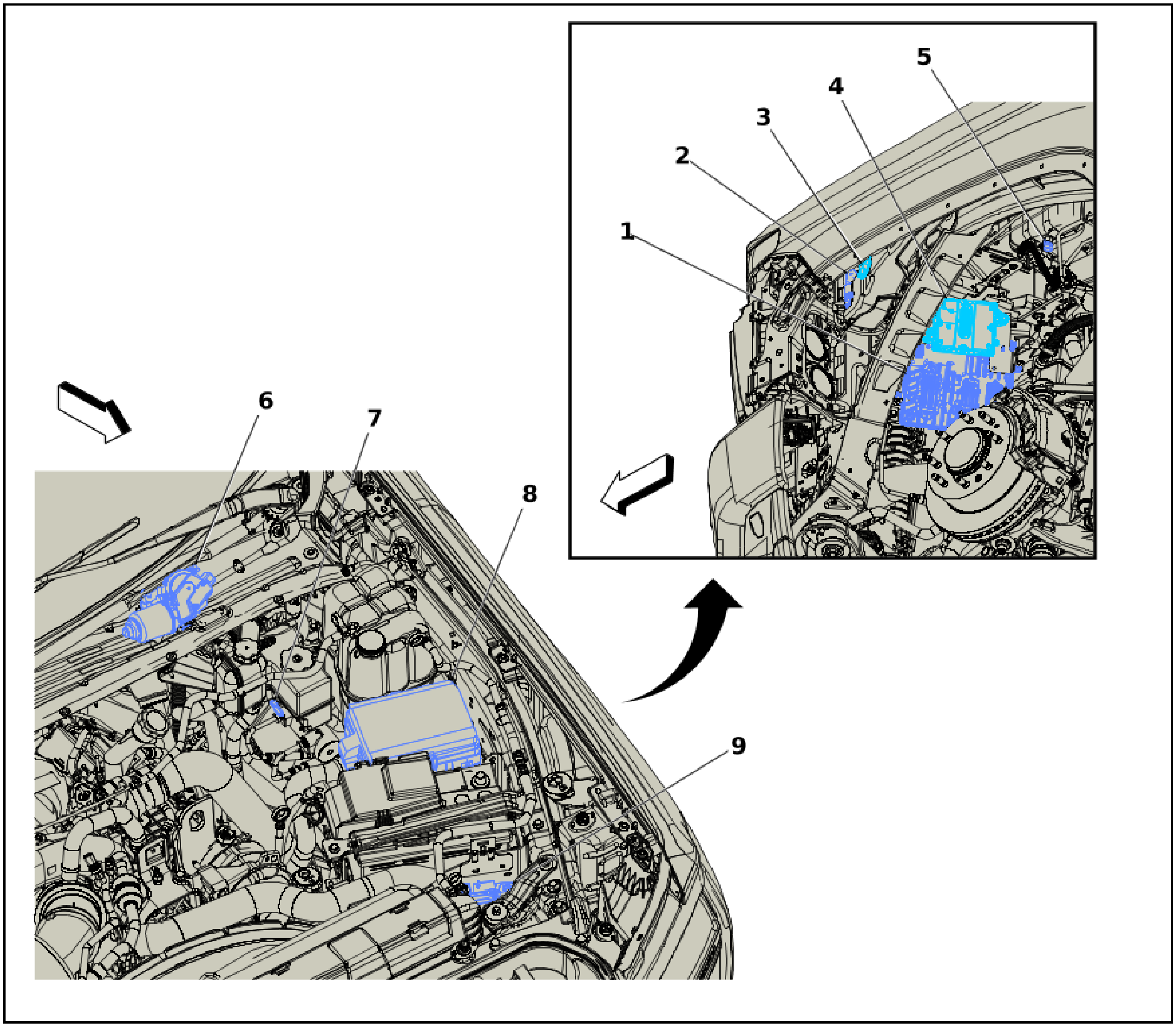
5236894

Items

(1)	E90DF Exterior Flood Lamp - Driver Outside Rearview Mirror Forward (DEZ/DLF)
(2)	T4M Radio Antenna
(3)	E3E Roof Clearance Lamp - Right Front Outer (U01)
(4)	E3C Roof Clearance Lamp - Front Middle (U01)
(5)	T4G Cellular Phone, Navigation, and Digital Radio Antenna
(6)	E3A Roof Clearance Lamp - Left Front Outer (U01)
(7)	E90PF Exterior Flood Lamp - Passenger Outside Rearview Mirror Forward (DEZ/DLF)
(8)	E2LM Side Marker Lamp - Left Middle
(9)	E13LA Headlamp Assembly - Left
(10)	E95FL Front Side Marker Lamp - Left Fender (Z88)

(11)	E29LF Fog Lamp - Left Front (T3U)
(12)	B306A Parking Assist Sensor - Front Left Outer (UD5)
(13)	B306B Parking Assist Sensor - Front Left Middle (UD5)
(14)	B306C Parking Assist Sensor - Front Right Middle (UD5)
(15)	B306D Parking Assist Sensor - Front Right Outer (UD5)
(16)	E29RF Fog Lamp - Right Front (T3U)
(17)	E95FR Front Side Marker Lamp - Right Fender (Z88)
(18)	E13RA Headlamp Assembly - Right
(19)	E2RM Side Marker Lamp - Right Middle

Engine Compartment Components - Left Side



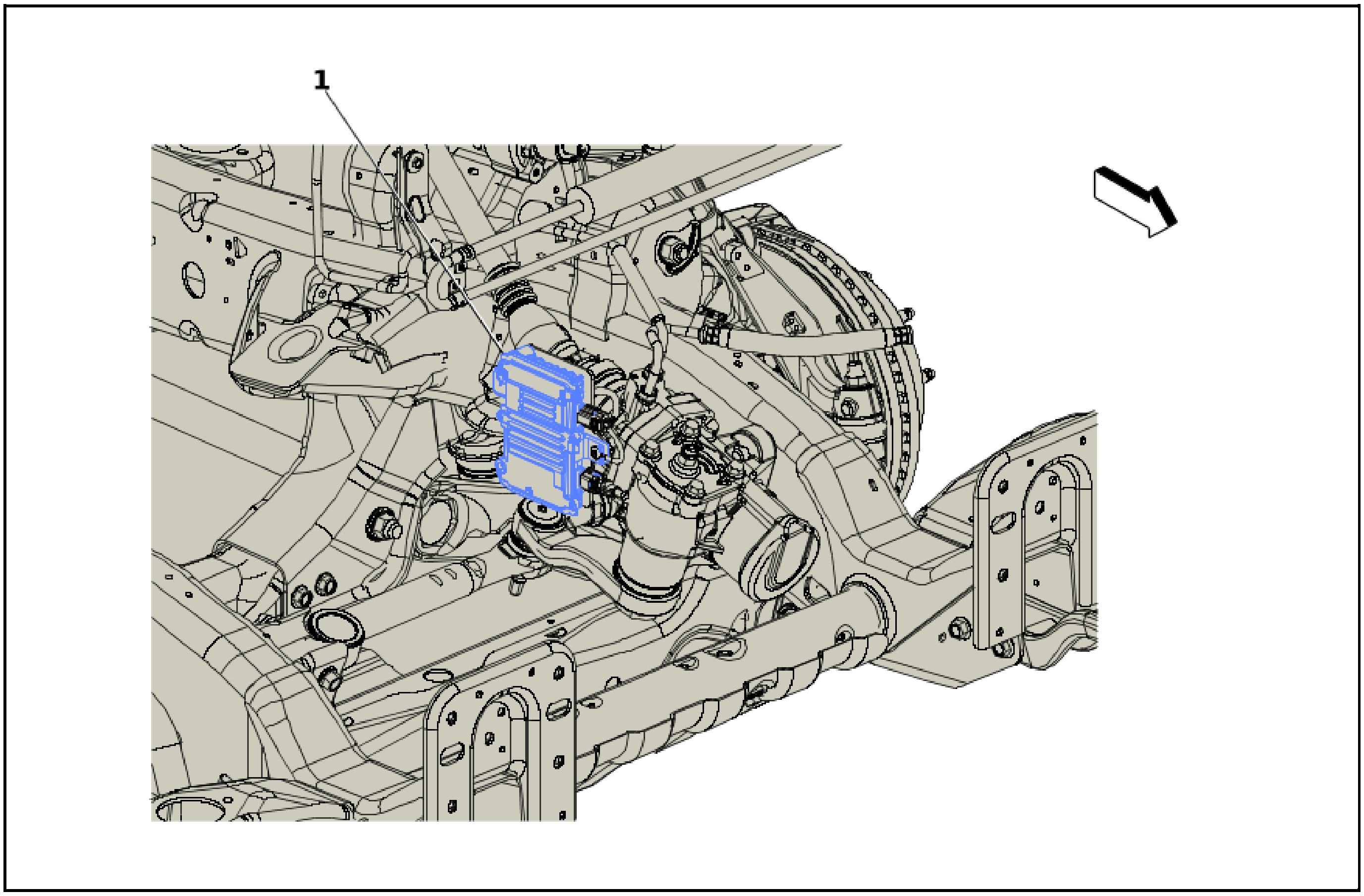
5286785

Items

(1)	K20 Engine Control Module
(2)	G24 Windshield Washer Pump
(3)	B118B Windshield Washer Fluid Level Switch
(4)	K69 Transfer Case Control Module (NQF/ NQH)
(5)	B33 Engine Coolant Level Switch (L5P)
(6)	M75 Windshield Wiper Motor
(7)	B20 Brake Fluid Level Switch

(8)	X50A Fuse Block - Underhood
(9)	K71 Transmission Control Module

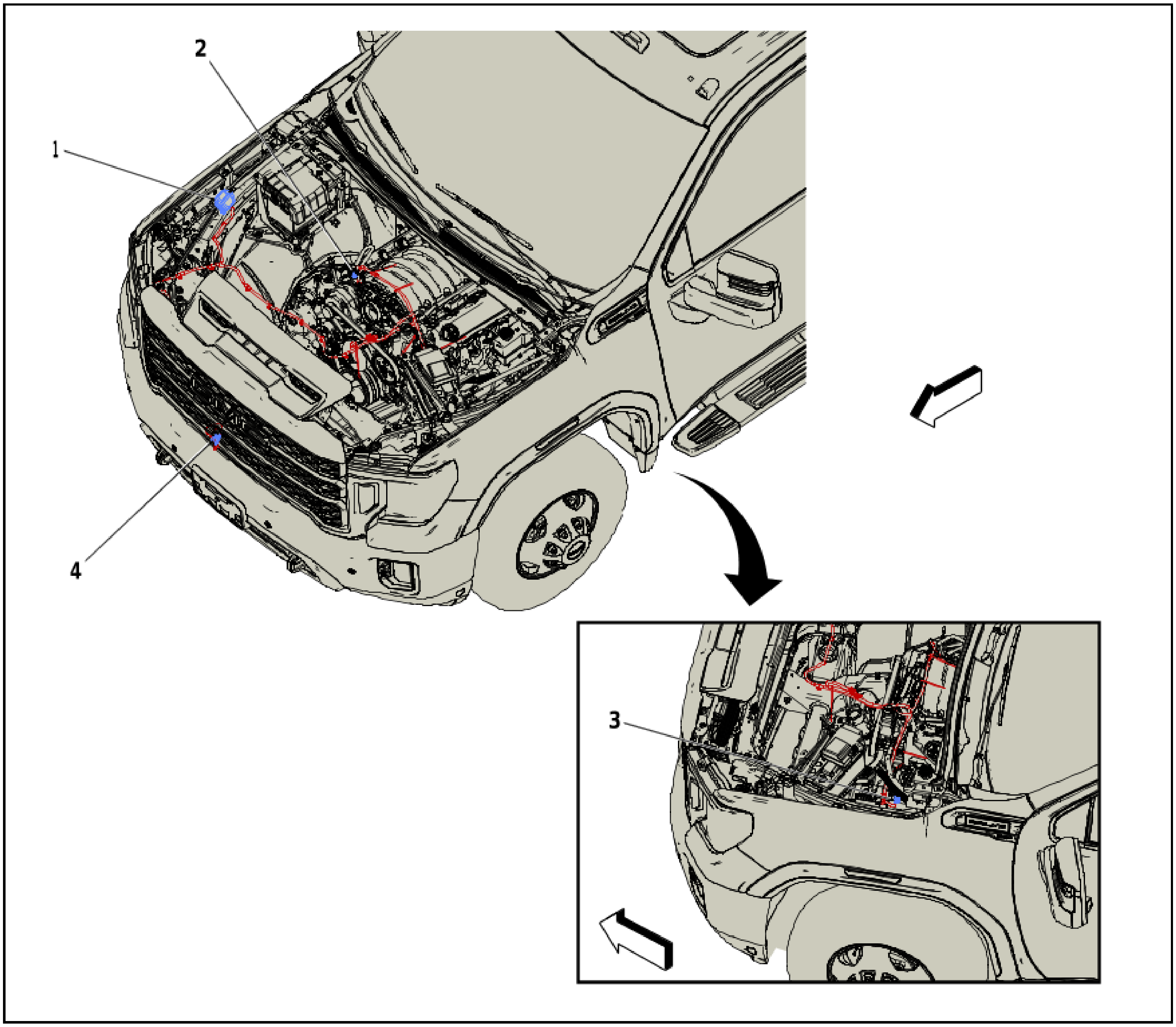
Engine Compartment Components - Left Front



5275649

	Items
(1)	K43 Power Steering Control Module

Engine Compartment Components - Left Front Snow Plow (VYU)

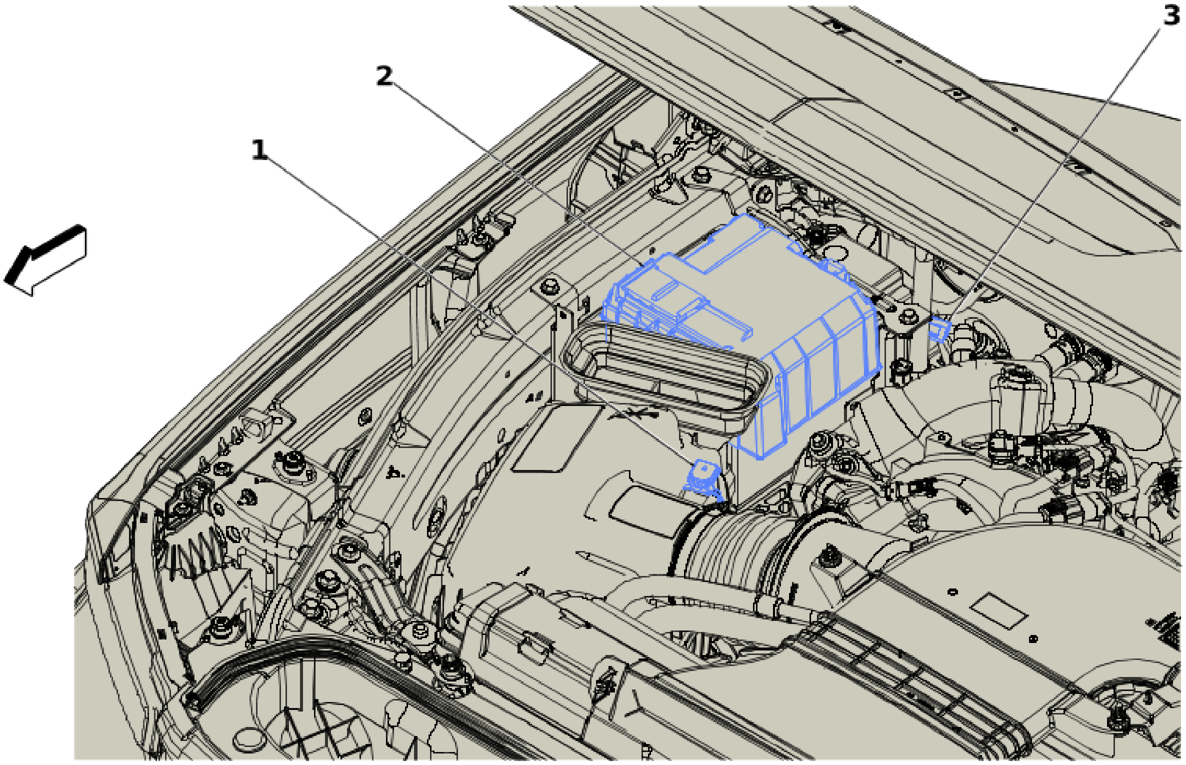


5432536

Items

(1)	X54 Fuse Block - Snow Plow (VYU)
(2)	X192 Snow Plow Harness to Snow Plow Harness (VYU)
(3)	G13E Generator - Auxiliary (KHF/VYU)
(4)	X55SP Fuse Holder - Snow Plow (VYU)

Engine Compartment Components - Right Front



5286105

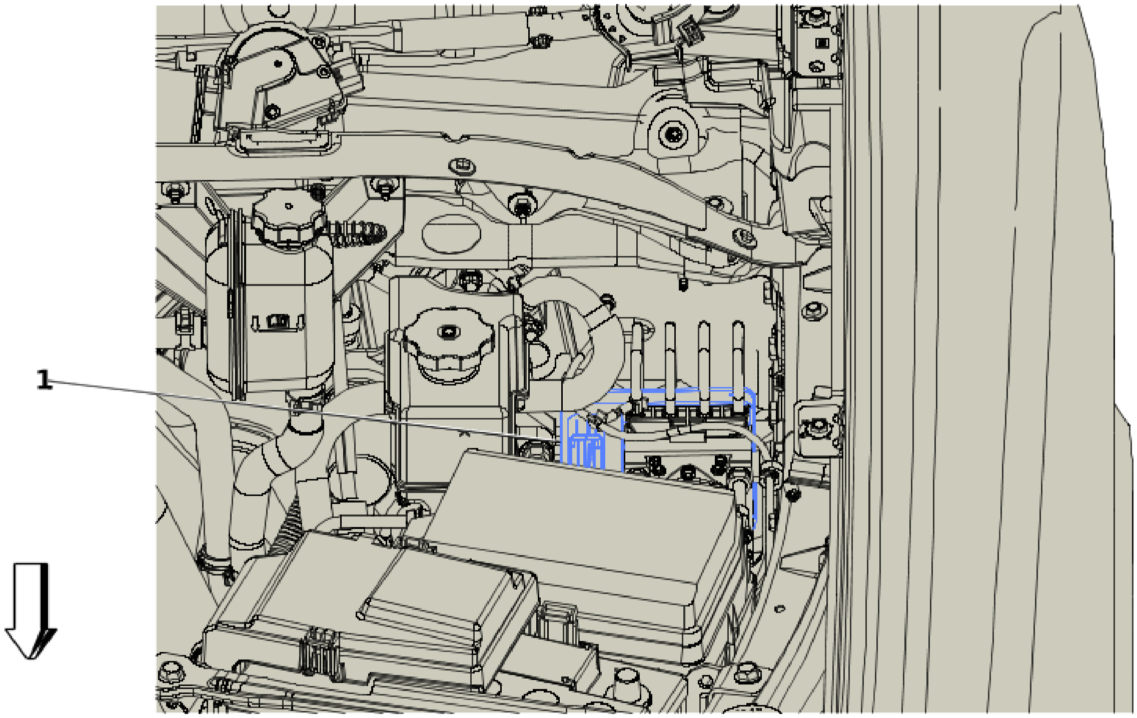
Items

(1) B75C Multifunction Intake Air Sensor

(2) X50D Fuse Block - Battery

(3) B18 Battery Current Sensor

Engine Compartment Components - Left Rear



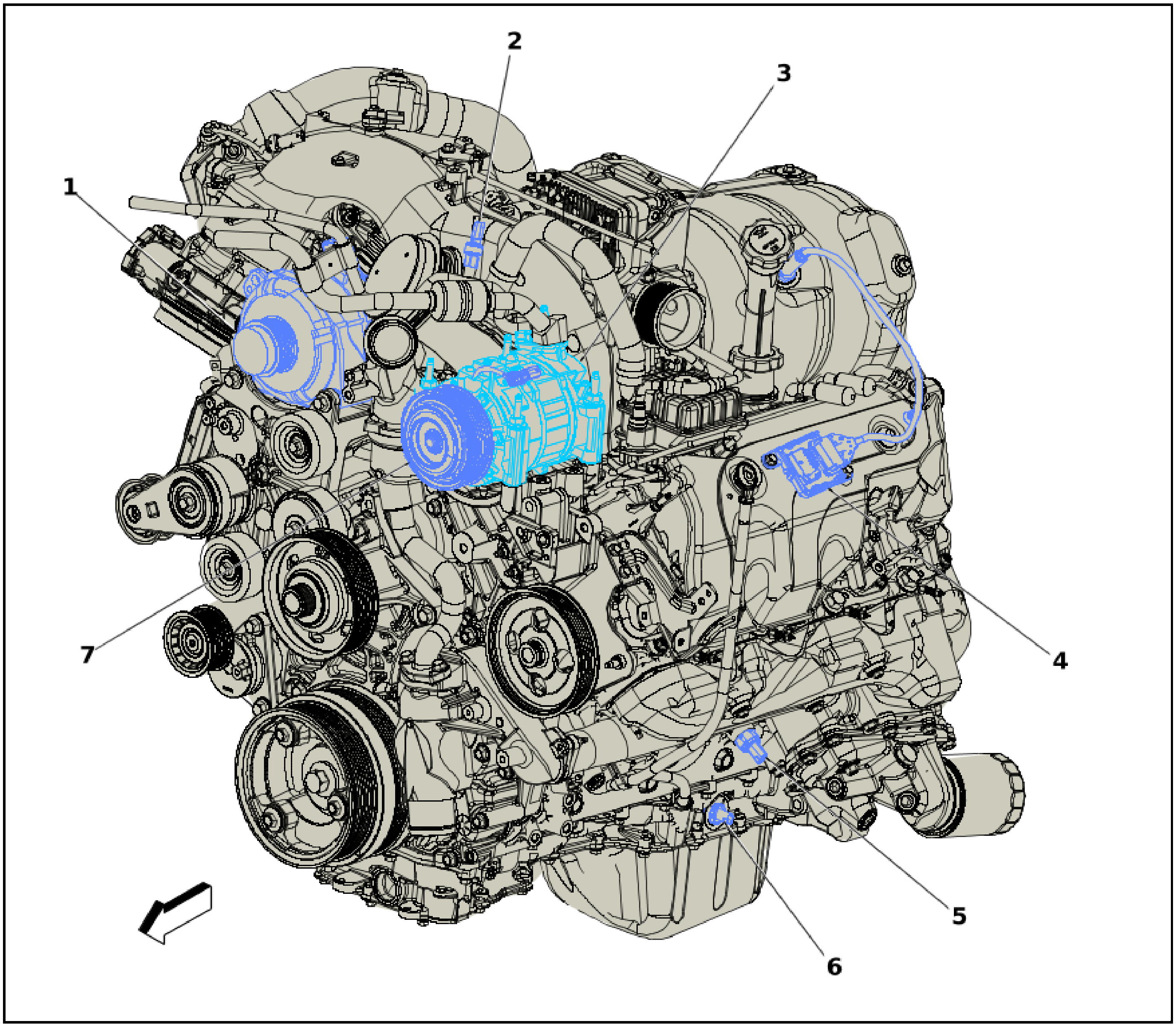
5286786

Items

(1)	K17 Electronic Brake Control Module

Powertrain Component Views

Engine Components - Left Front (L5P)

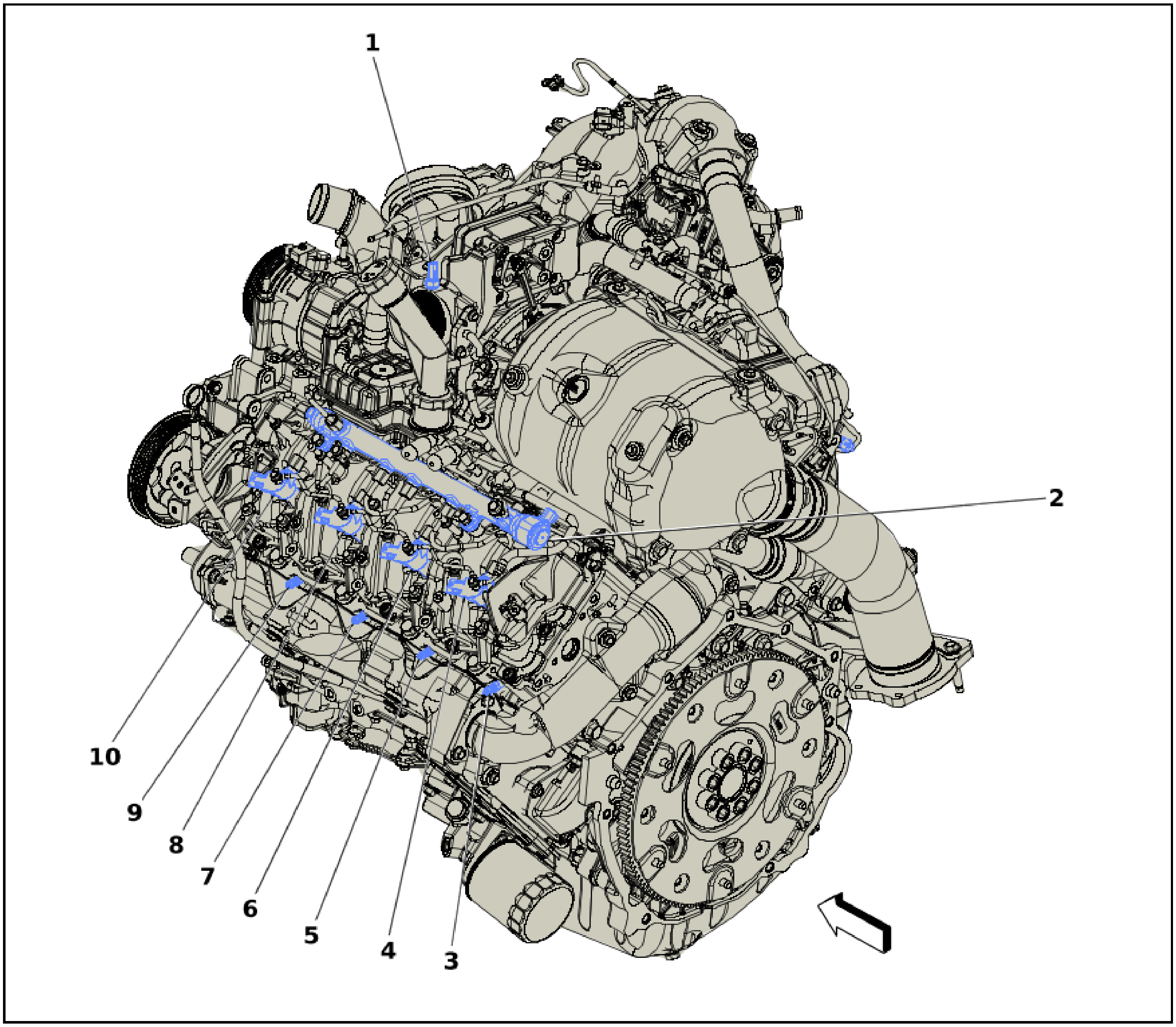


5218377

Items

(1)	G13 Generator
(2)	B1 A/C Refrigerant Pressure Sensor
(3)	Q2 A/C Compressor Clutch
(4)	B195A Nitrogen Oxides Sensor 1 (L5P)
(5)	B37B Engine Oil Pressure Sensor
(6)	B35 Engine Oil Level Switch
(7)	Q46 A/C Compressor Solenoid Valve

Engine Components - Left Rear (L5P)

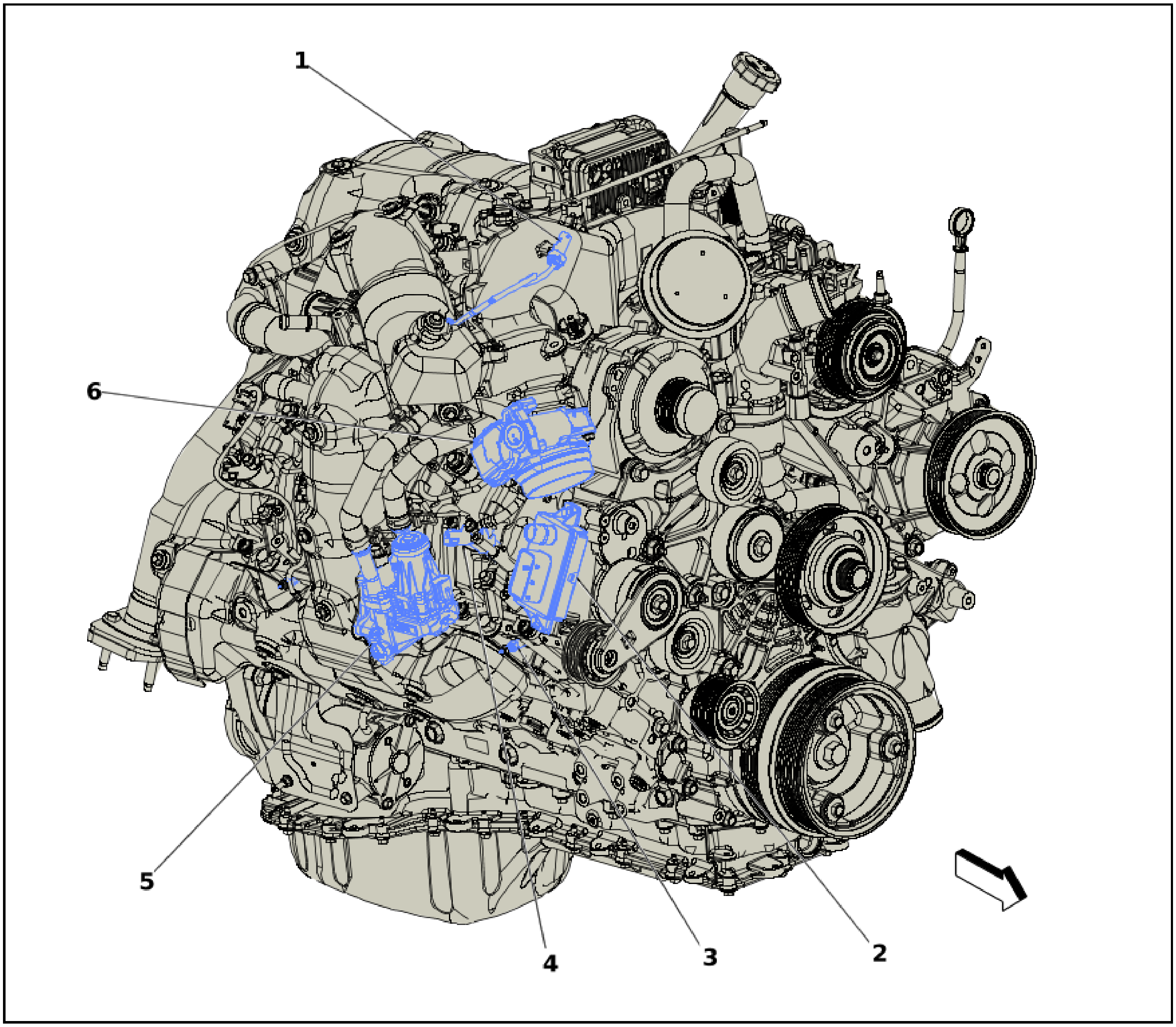


5218381

Items

(1)	B193A Charge Air Cooler Inlet Temperature Sensor (L5P)
(2)	Q18B Fuel Pressure Regulator 2 (L5P)
(3)	E12H Glow Plug 8 (L5P)
(4)	Q17H Fuel Injector 8
(5)	E12F Glow Plug 6 (L5P)
(6)	Q17F Fuel Injector 6
(7)	E12D Glow Plug 4 (L5P)
(8)	Q17D Fuel Injector 4
(9)	E12B Glow Plug 2 (L5P)
(10)	Q17B Fuel Injector 2

Engine Components - Right Front (1 of 2) (L5P)



5218382

Items

(1) B130A Exhaust Gas Recirculation Temperature Sensor 1 (L5P)

(2) K34 Glow Plug Control Module (L5P)

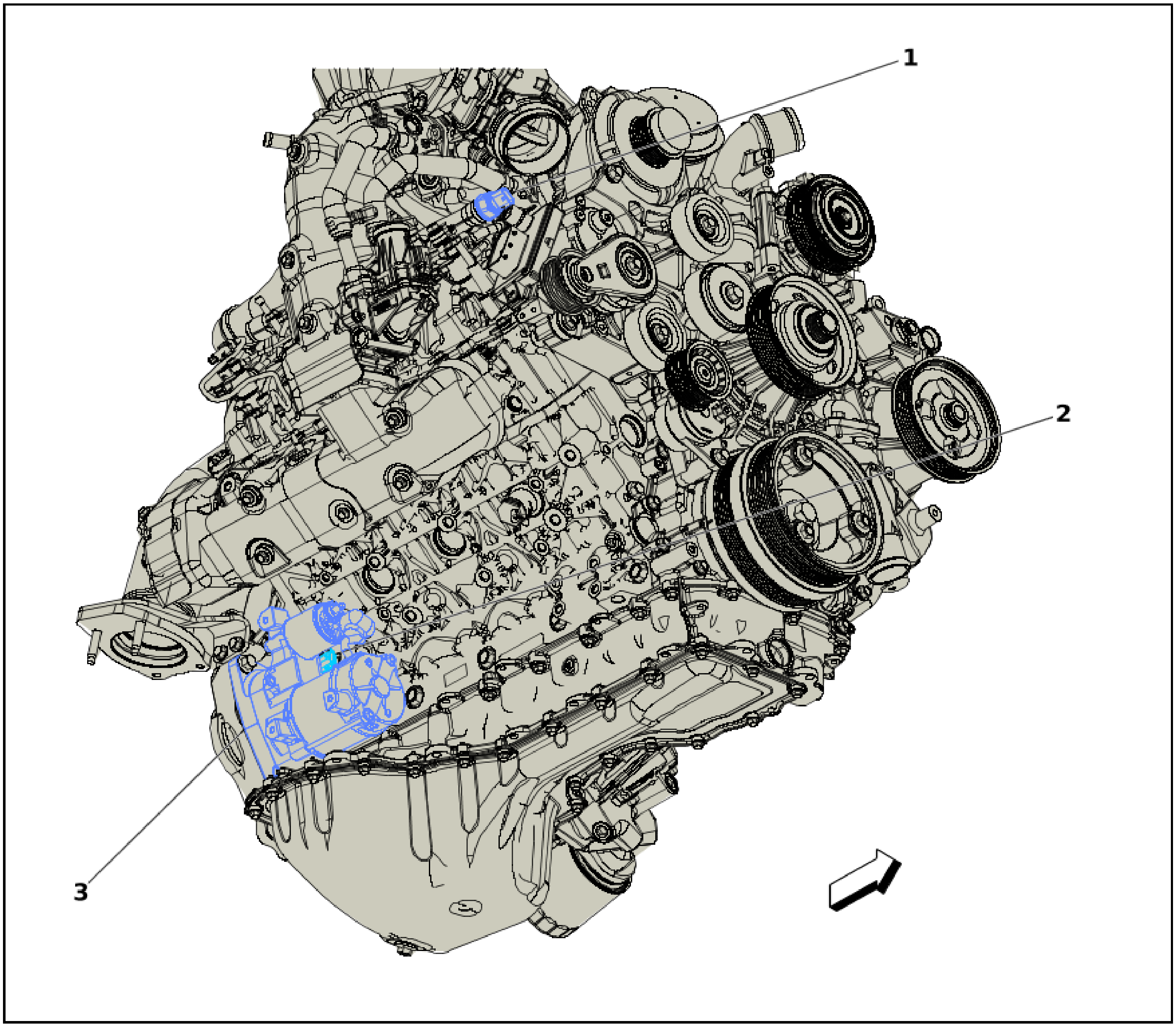
(3) E12A Glow Plug 1 (L5P)

(4) Q17A Fuel Injector 1

(5) Q14 Exhaust Gas Recirculation Valve (L5P)

(6) Q20 Intake Air Flow Valve (L5P)

Engine Components - Right Front (2 of 2) (L5P)

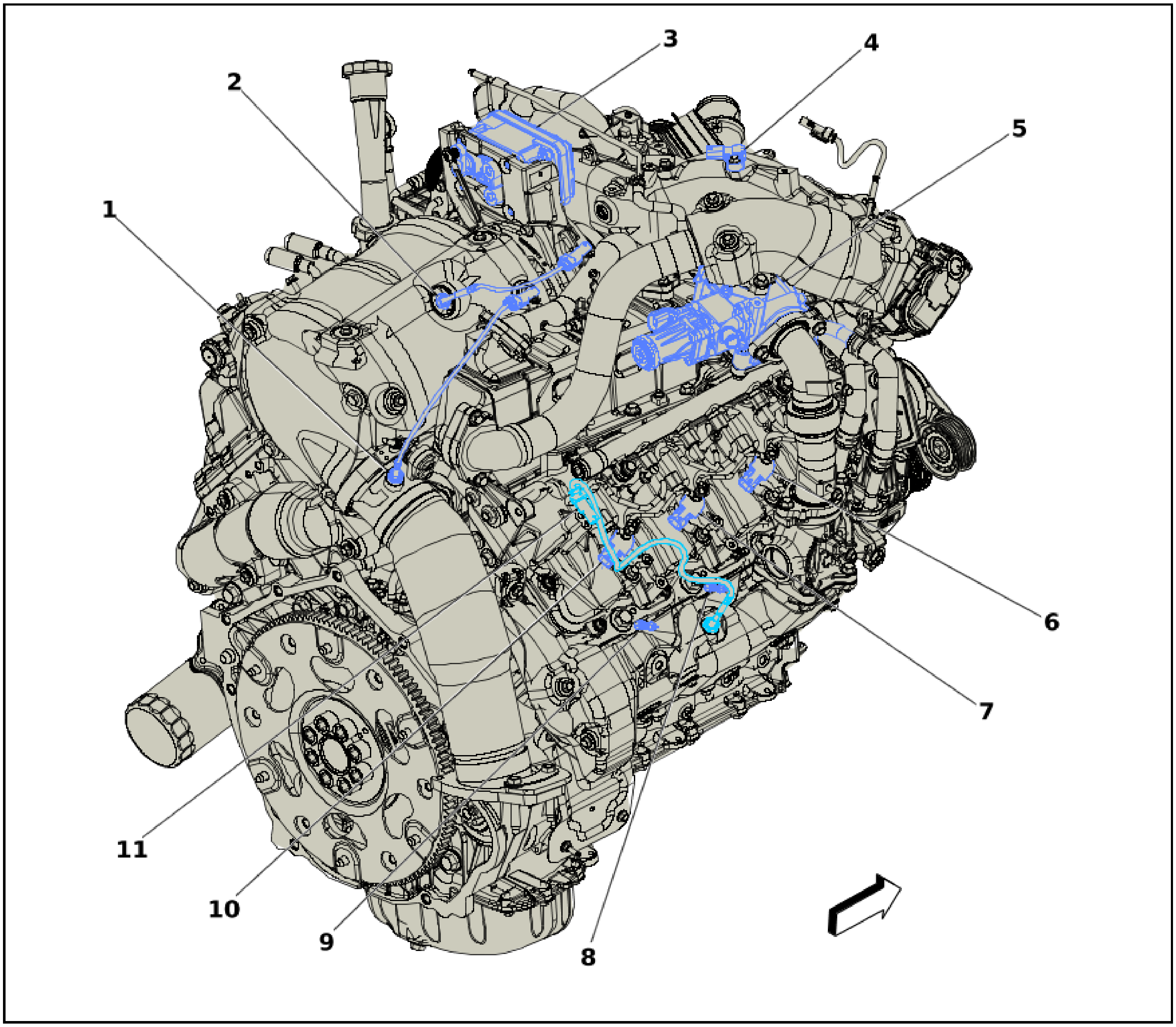


5218383

Items

(1)	B47B Fuel Rail Pressure Sensor (L5P)
(2)	B26 Crankshaft Position Sensor
(3)	M64 Starter Motor

Engine Components - Right Rear (L5P)



5218390

Items

(1) B131B Exhaust Temperature Sensor 2 (L5P)

(2) B131A Exhaust Temperature Sensor 1 (L5P)

(3) M103 Turbocharger Vane Position Actuator (L5P)

(4) B65 Intake Manifold Pressure and Air Temperature Sensor (L5P)

(5) Q47 Exhaust Gas Recirculation Cooler Bypass Solenoid Valve

(6) Q17C Fuel Injector 3

(7) Q17E Fuel Injector 5

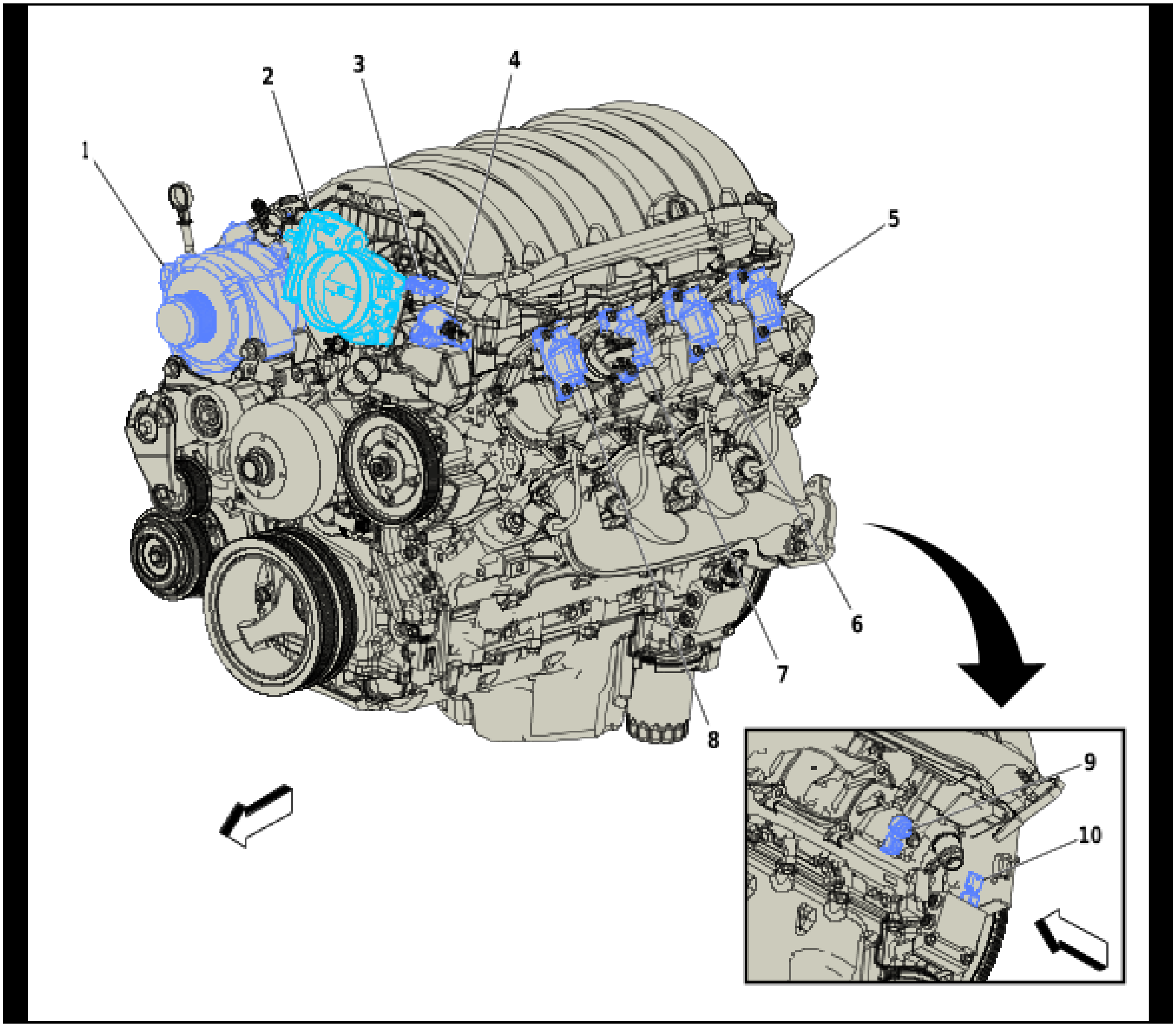
(8) E12E Glow Plug 5 (L5P)

(9) E12G Glow Plug 7 (L5P)

(10) Q17G Fuel Injector 7

(11) B130B Exhaust Gas Recirculation Temperature Sensor 2 (L5P)

Engine Components - Left Front (L8T)

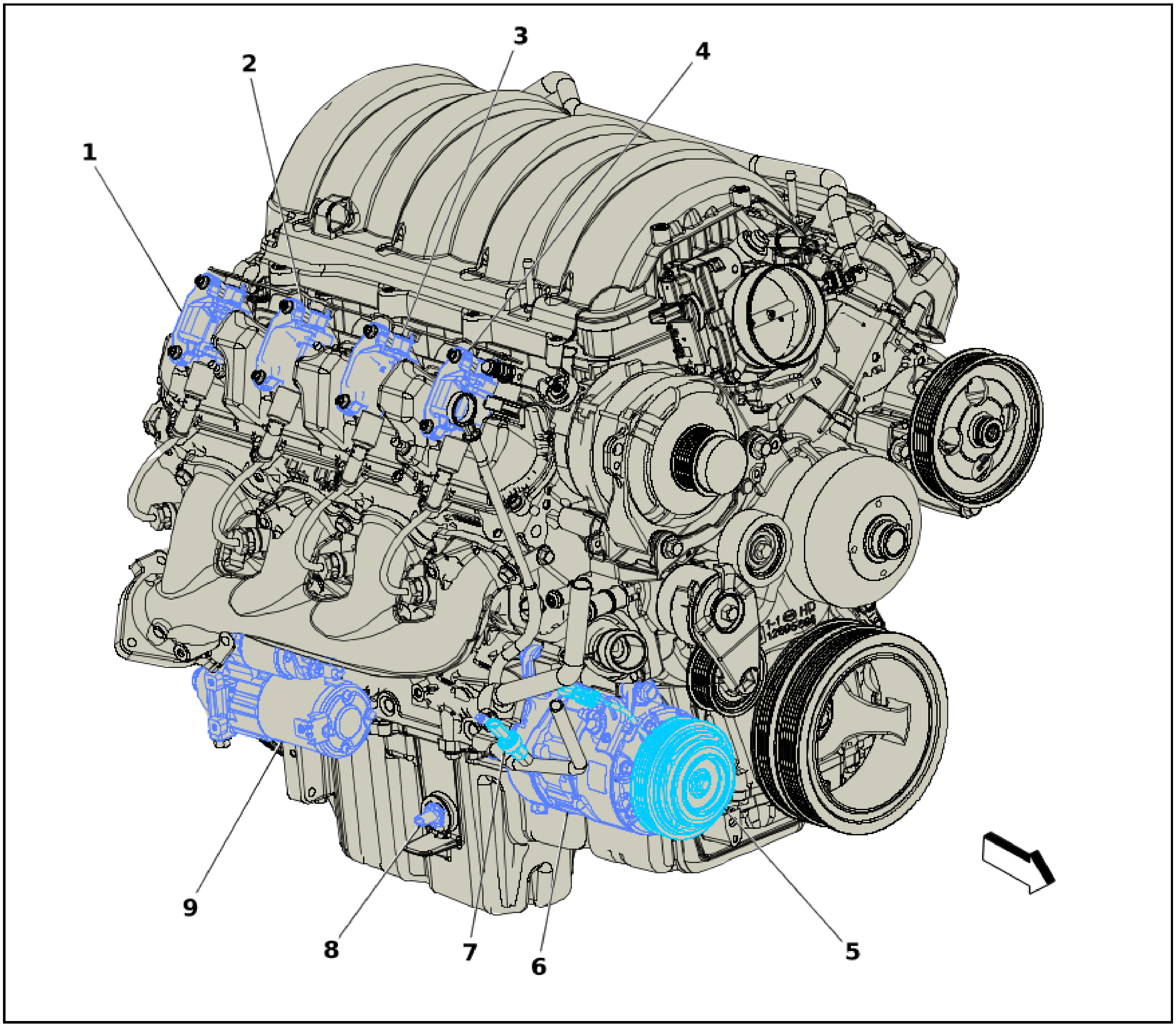


5218379

Items

(1)	G13 Generator
(2)	Q38 Throttle Body (L8T)
(3)	B74 Manifold Absolute Pressure Sensor (L8T)
(4)	Q12 Evaporative Emission Purge Solenoid Valve (L8T)
(5)	T8G Ignition Coil 7 (L8T)
(6)	T8E Ignition Coil 5 (L8T)
(7)	T8C Ignition Coil 3 (L8T)
(8)	T8A Ignition Coil 1 (L8T)
(9)	B68A Knock Sensor 1 (L8T)
(10)	B36 Engine Oil Temperature Sensor (L8T)

Engine Components - Right Front (L8T)

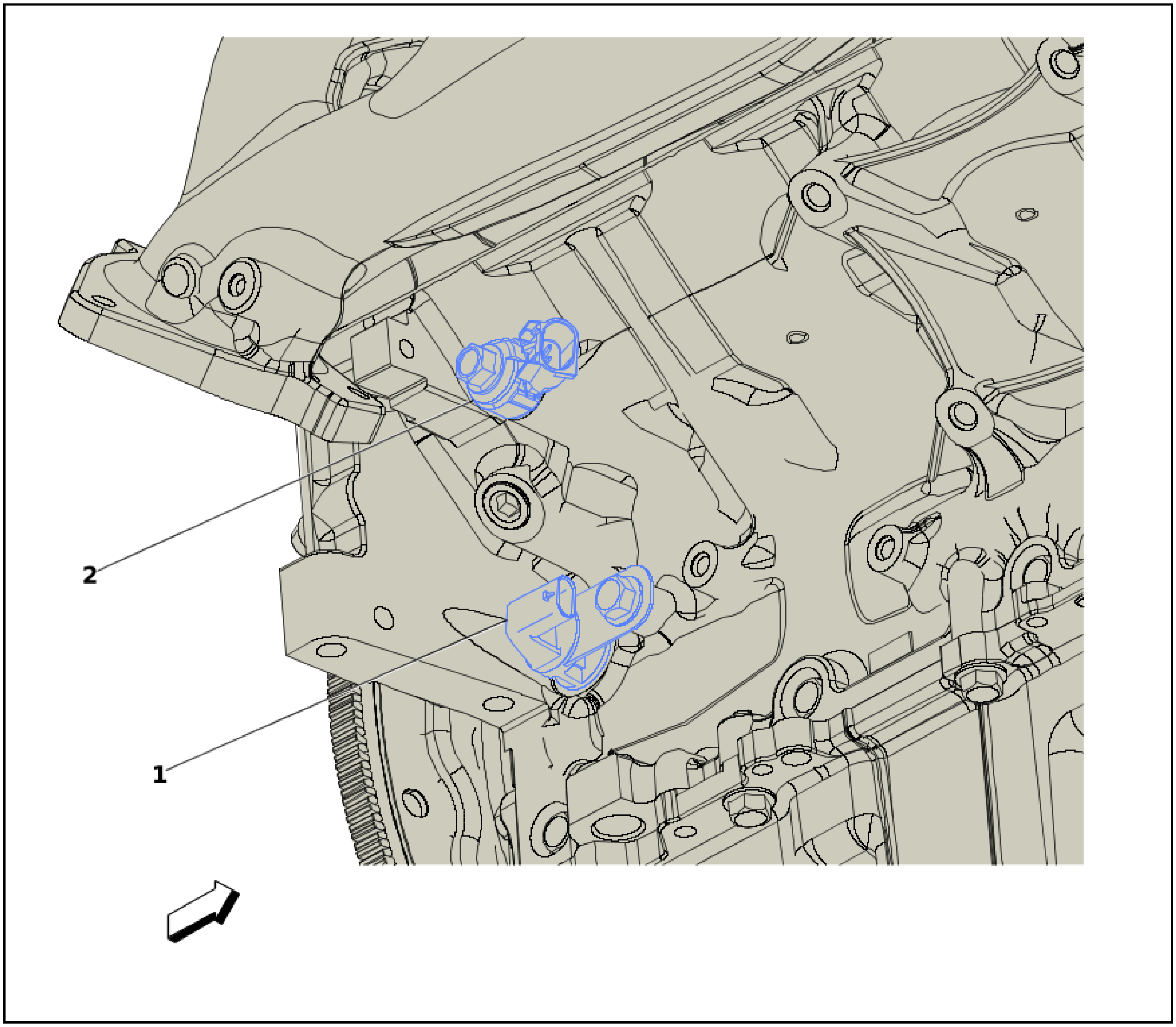


5218386

Items

(1)	T8H Ignition Coil 8 (L8T)
(2)	T8F Ignition Coil 6 (L8T)
(3)	T8D Ignition Coil 4 (L8T)
(4)	T8B Ignition Coil 2 (L8T)
(5)	Q2 A/C Compressor Clutch
(6)	Q46 A/C Compressor Solenoid Valve
(7)	B1 A/C Refrigerant Pressure Sensor
(8)	B35 Engine Oil Level Switch
(9)	M64 Starter Motor

Engine Components - Right Rear (L8T)

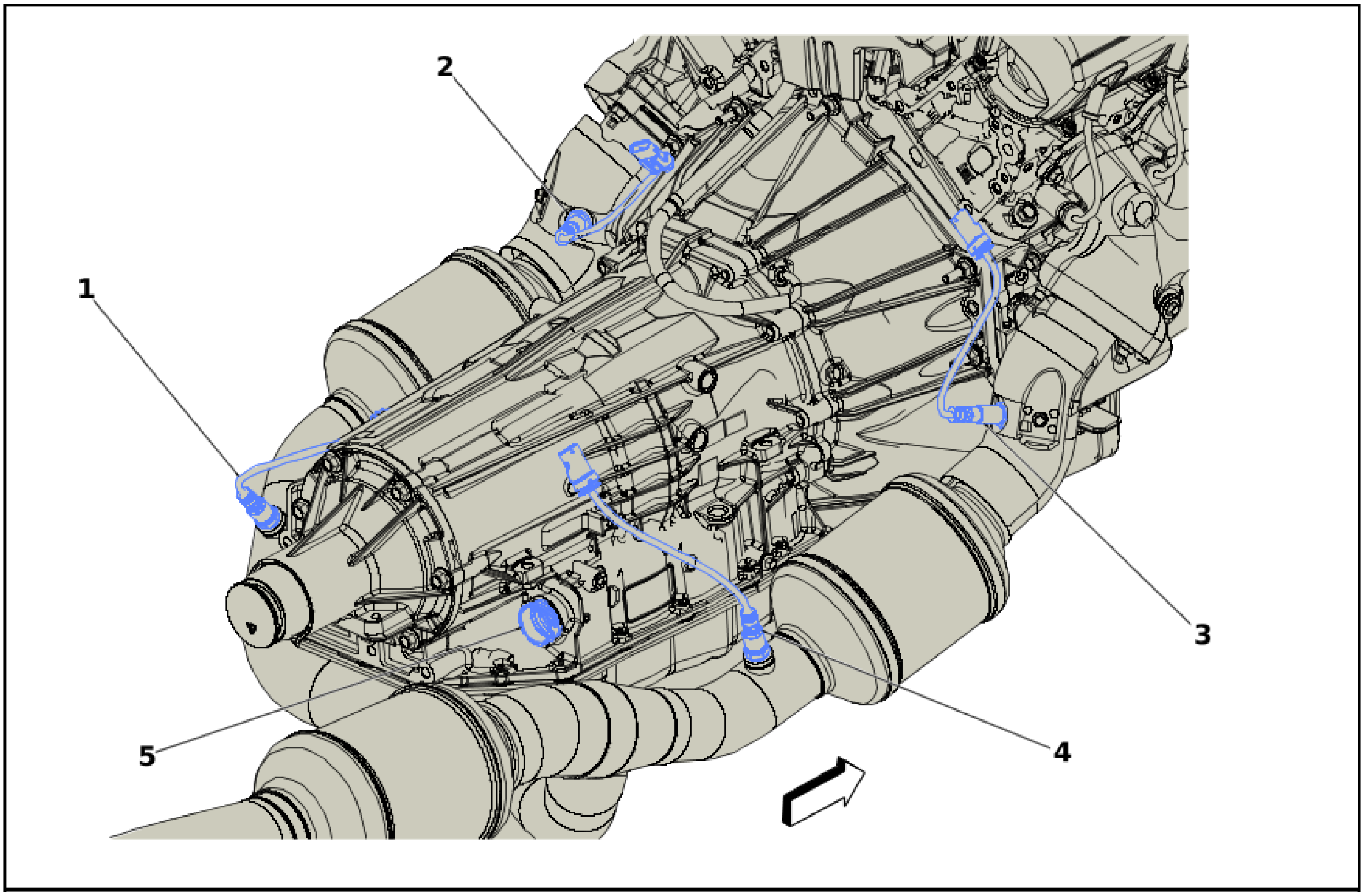


5218389

Items

(1)	B26 Crankshaft Position Sensor
(2)	B68B Knock Sensor 2 (L8T)

Engine Components - Rear of Engine (L8T)



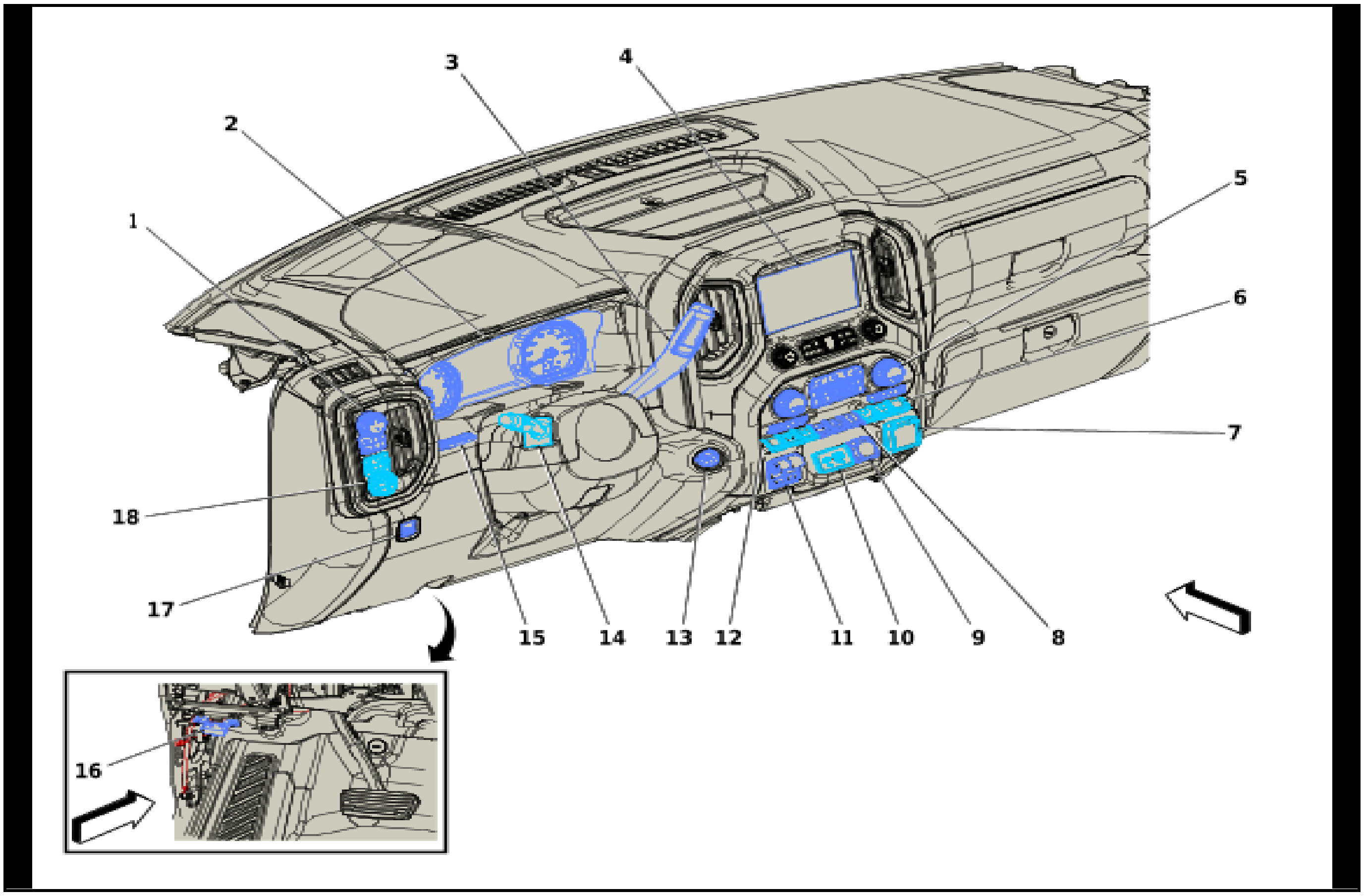
5218392

Items

(1)	B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (L8T)
(2)	B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (L8T)
(3)	B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L8T)
(4)	B52F Heated Oxygen Sensor - Bank 2 Sensor 2 (L8T)
(5)	K71 Transmission Control Module

Instrument Panel/Center Console Component Views

Instrument Panel - Left Front Components



5254401

Items

(1) S126 Drive Mode Select Switch (URC)

(2) P16 Instrument Cluster

(3) S3 Transmission Shift Lever

(4) P17 Info Display Module

(5) A26 HVAC Controls

(6) S171R Instrument Panel Center Accessory Function Switch - Right

(7) X81 Accessory Power Receptacle - 110V AC (KI4)

(8) S86 Vehicle Stability Control Switch

(9) X80G Accessory Power Receptacle - Instrument Panel

(10) X92 USB Receptacle

(11) S76 Trailer Brake Control Switch

(12) S171L Instrument Panel Center Accessory Function Switch - Left

(13) S38 Ignition Mode Switch (BTM)

(14) S78 Turn Signal/Multifunction Switch

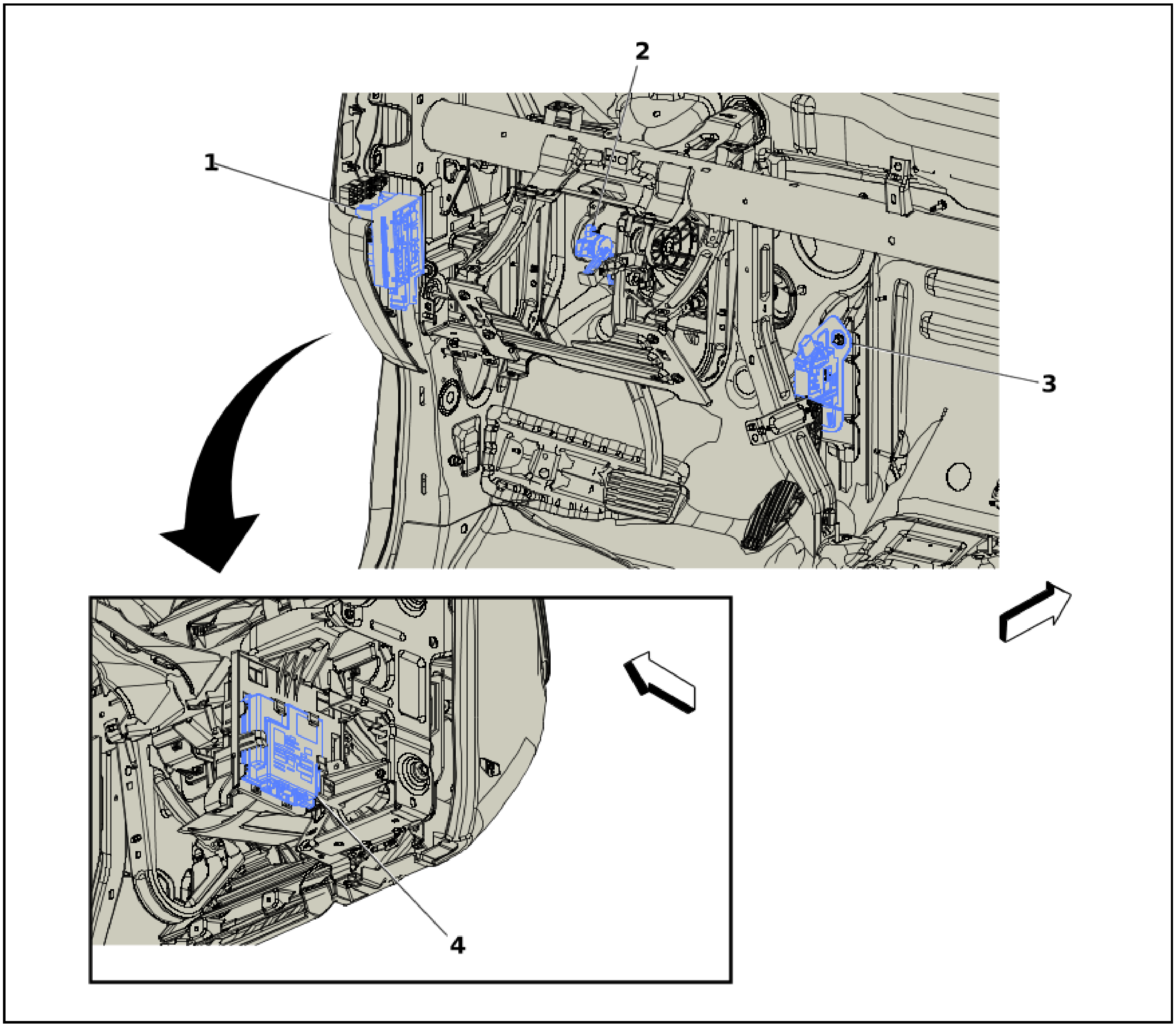
(15) S27 Head-Up Display Switch (UV6)

(16) X84 Data Link Connector

(17) S91 Park Brake Control Switch

(18) S30 Headlamp Switch

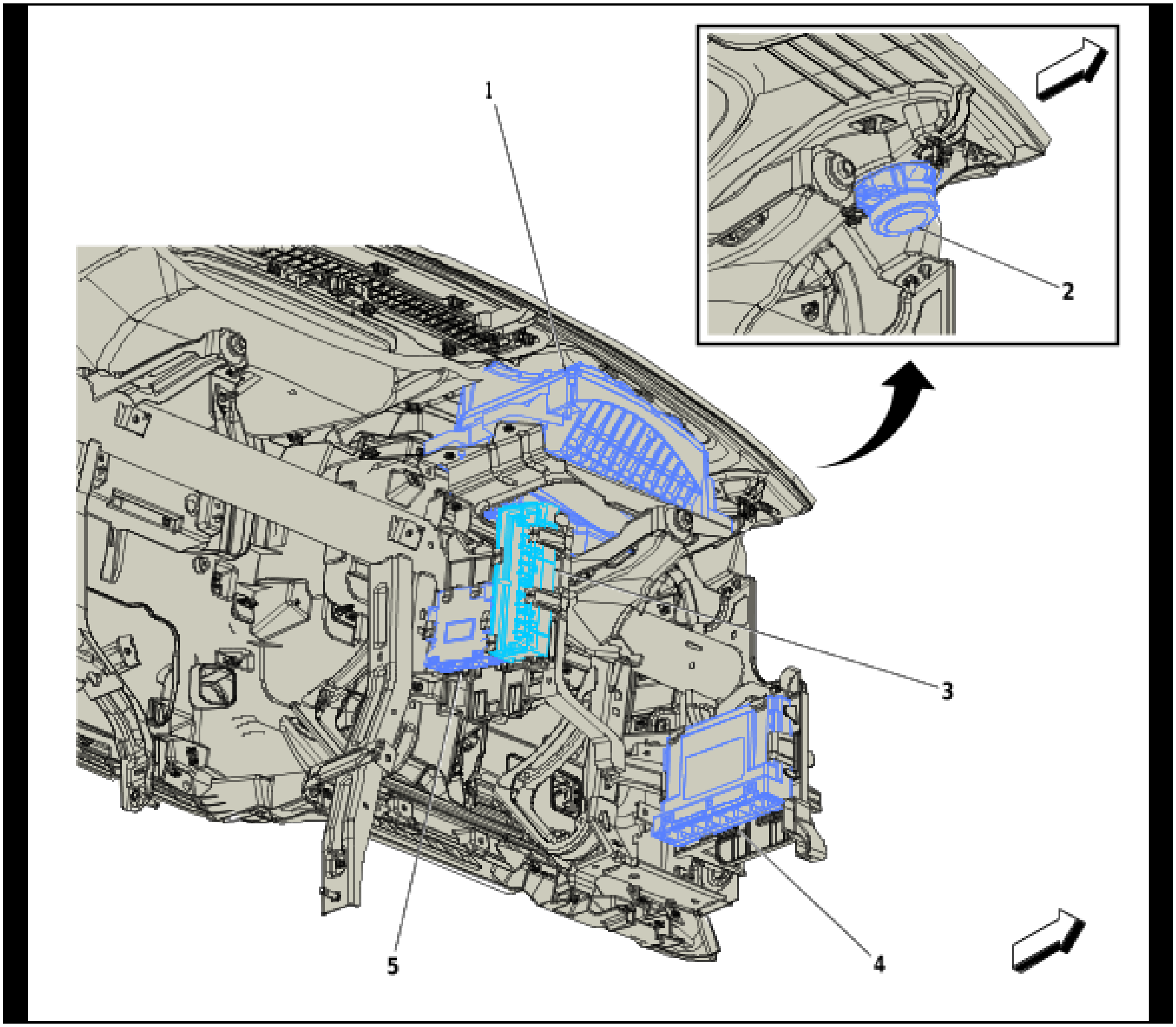
Instrument Panel - Behind Left Side Components



Items

(1)	X51L Fuse Block - Instrument Panel Left
(2)	B22 Brake Pedal Position Sensor
(3)	B107 Accelerator Pedal Position Sensor
(4)	K84 Keyless Entry Control Module (BTM)

Instrument Panel - Left Rear Components

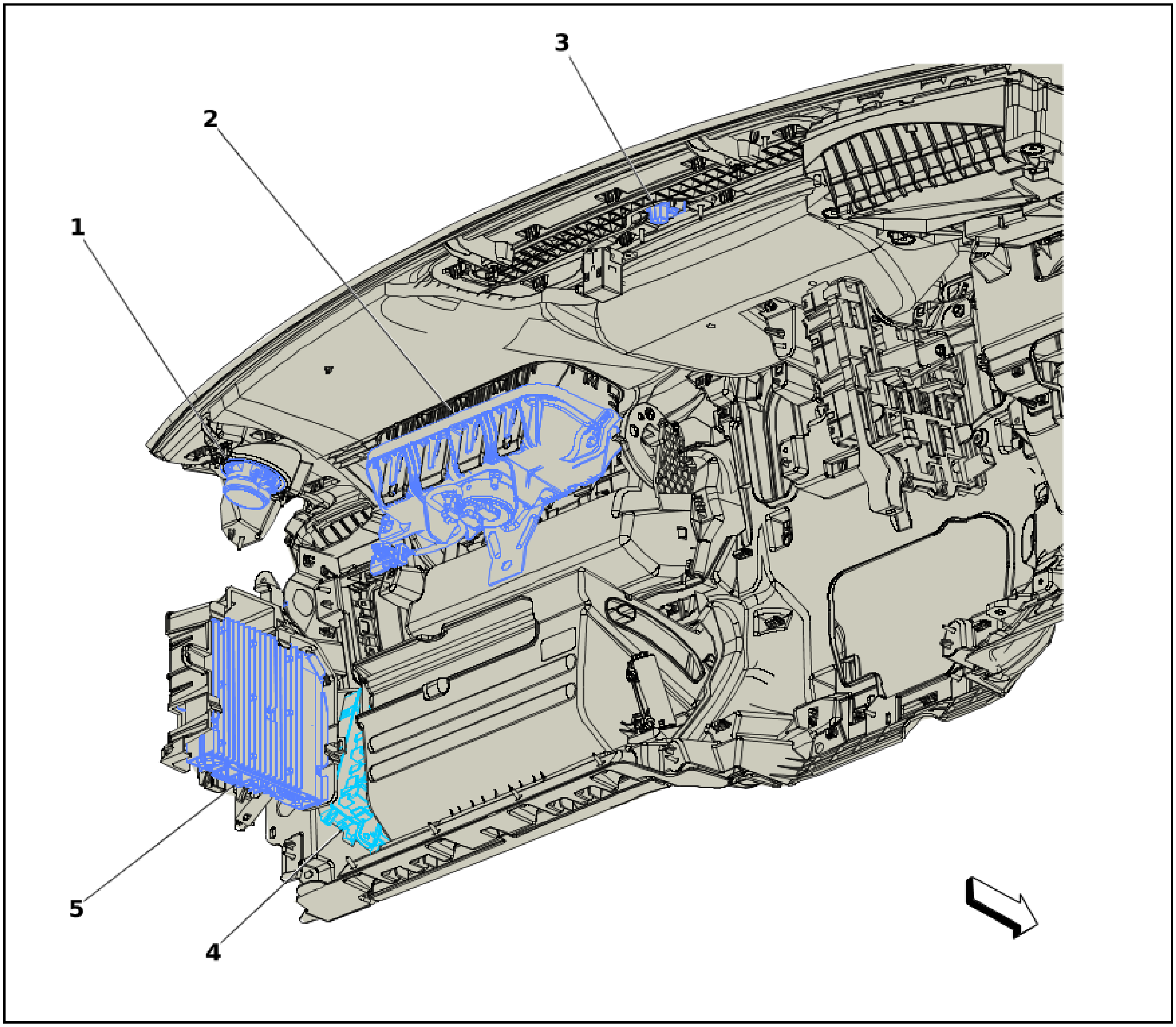


5254405

Items

(1) P29 Head-Up Display (UV6)
(2) P19J Speaker - Left Instrument Panel
(3) K33 HVAC Control Module
(4) K9 Body Control Module
(5) K56 Serial Data Gateway Module

Instrument Panel - Right Rear Components

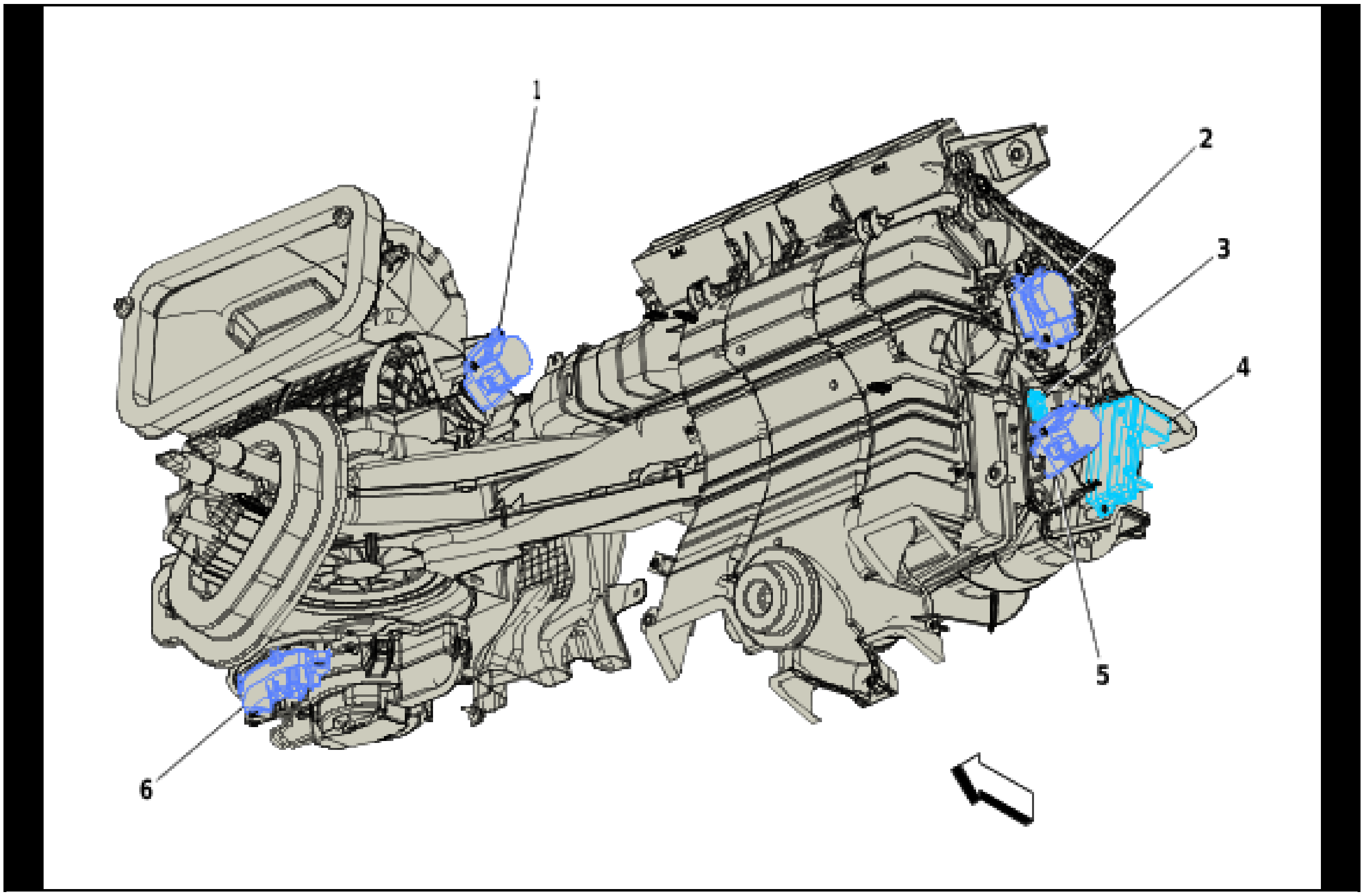


5254408

Items

(1) P19W Speaker - Right Instrument Panel
(2) F101 Passenger Instrument Panel Air Bag
(3) B10B Ambient Light/Sunload Sensor
(4) X51R Fuse Block - Instrument Panel Right
(5) A11 Radio

HVAC Components

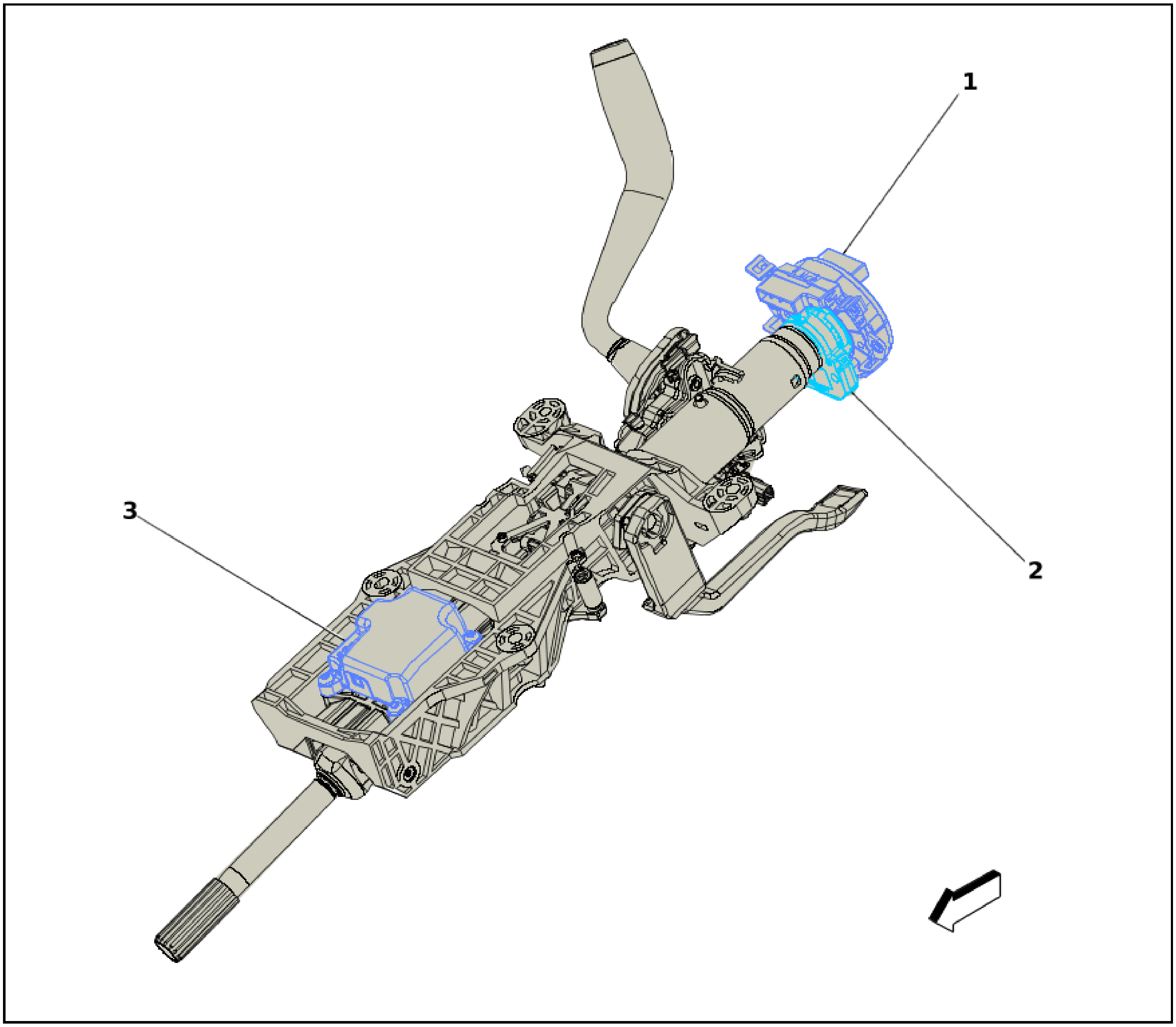


5276830

Items

(1) M4 Air Inlet Door Actuator
(2) M37 Mode Door Actuator
(3) B39 A/C Evaporator Temperature Sensor
(4) E40 Electrical Auxiliary Heater (C32)
(5) M6L Air Temperature Door Actuator - Left
(6) M8 Blower Motor

Steering Column Components



5254411

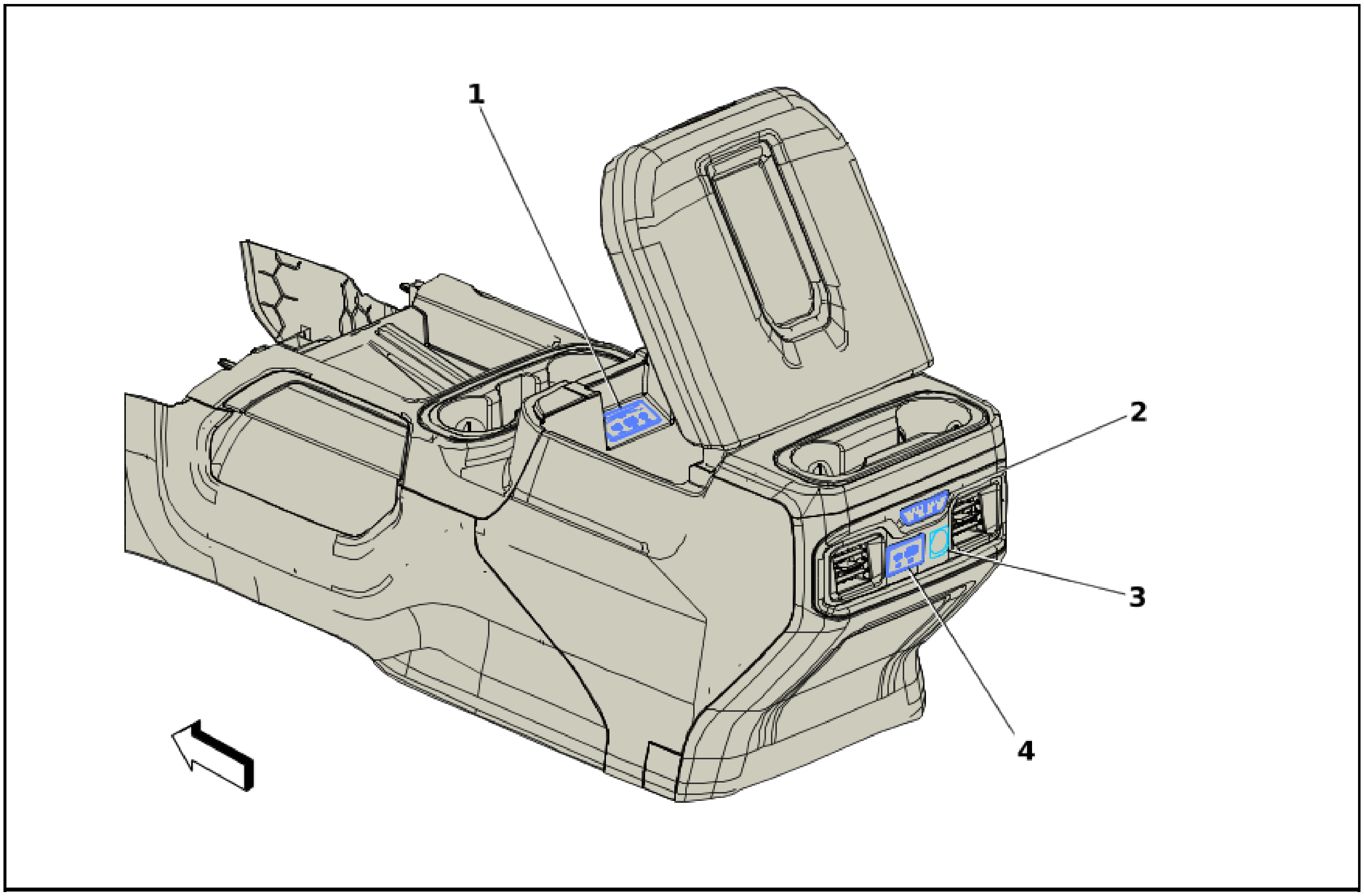
Items

(1) X85 Steering Wheel Air Bag Coil

(2) B99 Steering Wheel Angle Sensor

(3) K60 Steering Column Lock Module (BTM)

Center Console Components (1 of 3)

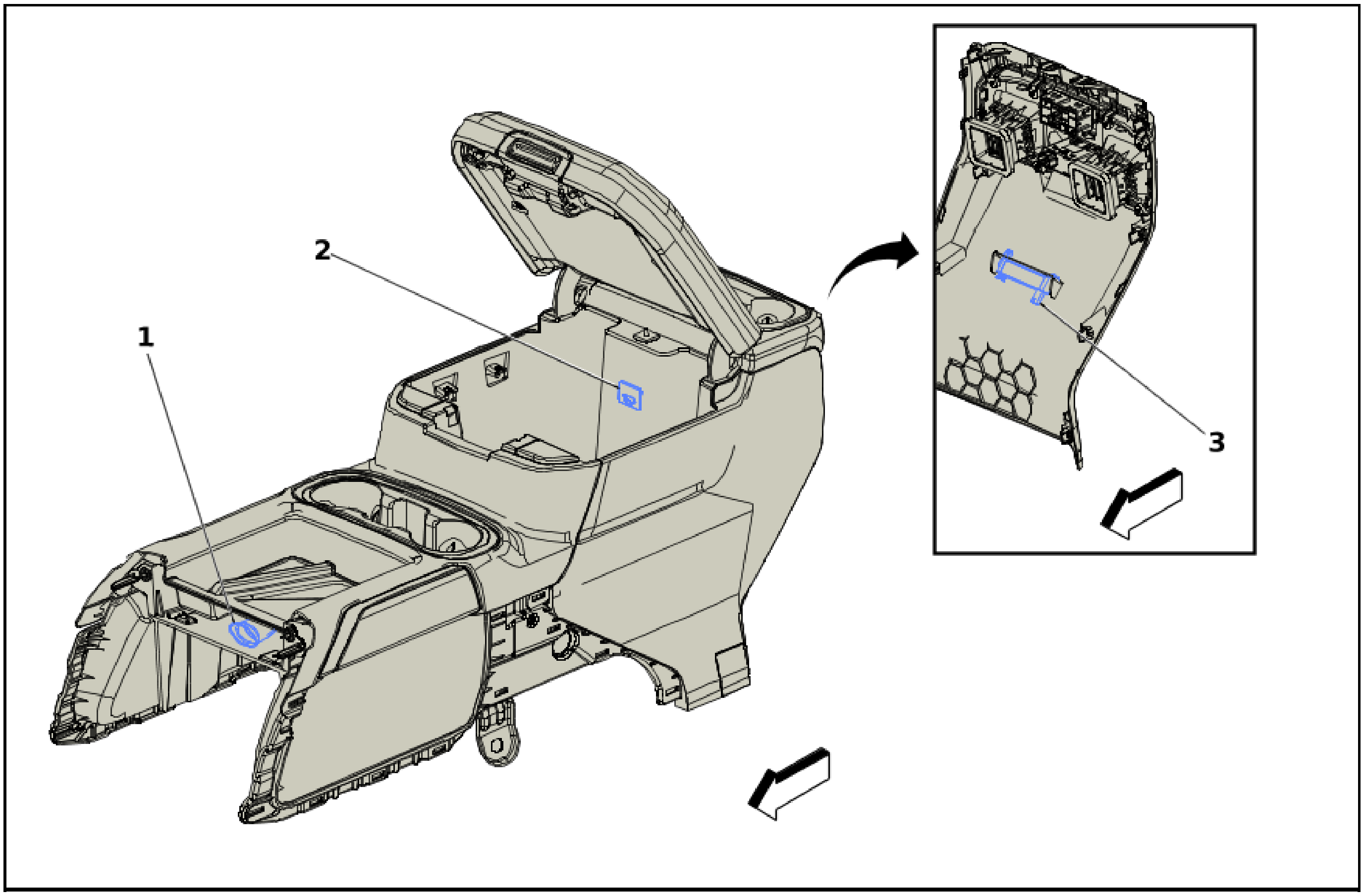


5276831

Items

(1)	X83 Auxiliary Audio Input
(2)	S32R Seat Heating Switch - Rear (KA6)
(3)	X80L Accessory Power Receptacle - Center Console Rear (D07)
(4)	X92C USB Receptacle - Center Console Rear (D07)

Center Console Components (2 of 3)



5277805

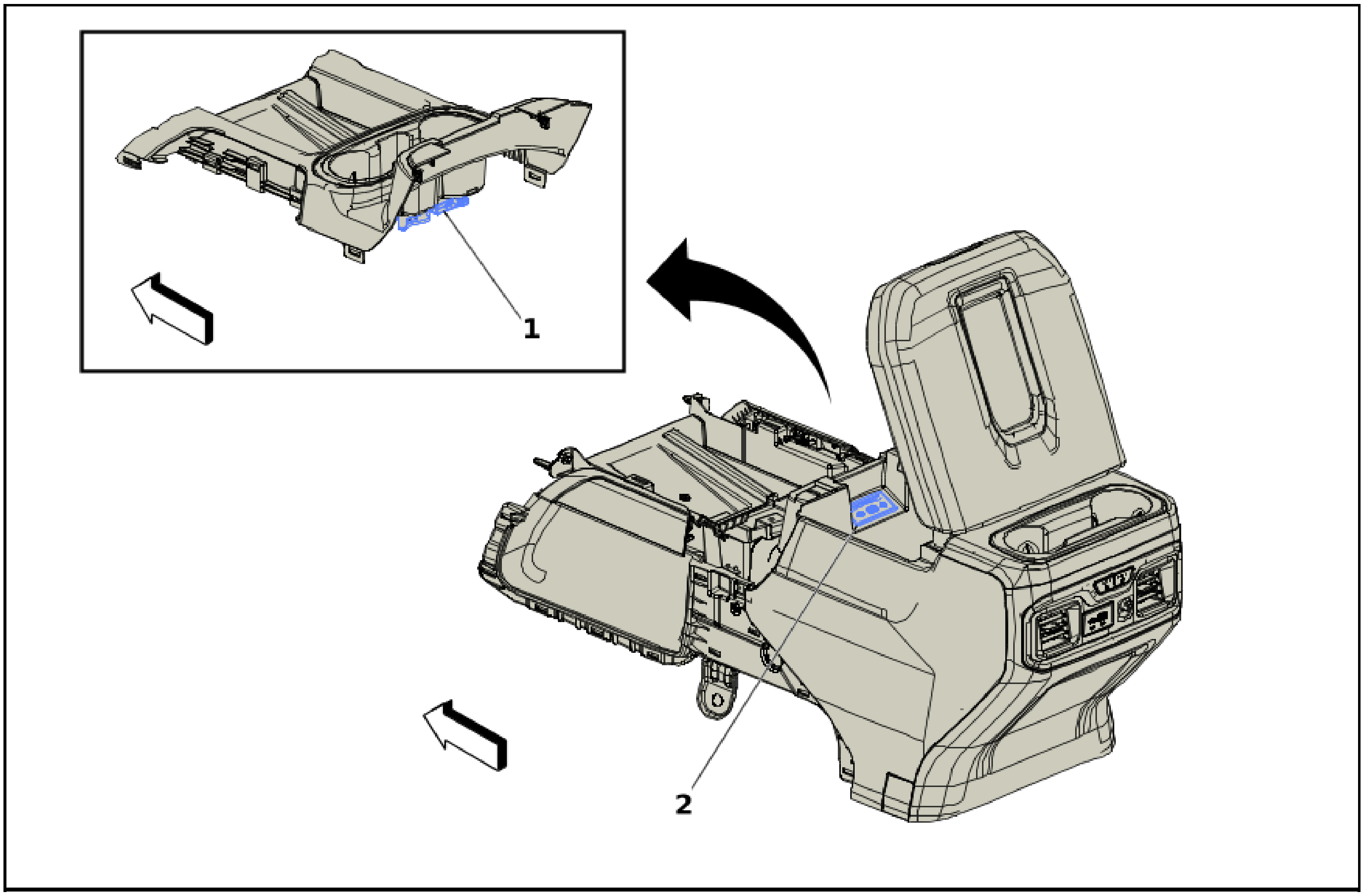
Items

(1) T22 Mobile Device Wireless Charger Module (K4C)

(2) E28 Center Console Compartment Lamp (D07)

(3) T10J Keyless Entry Antenna - Center Console Front (BTM+D07)

Center Console Components (3 of 3)



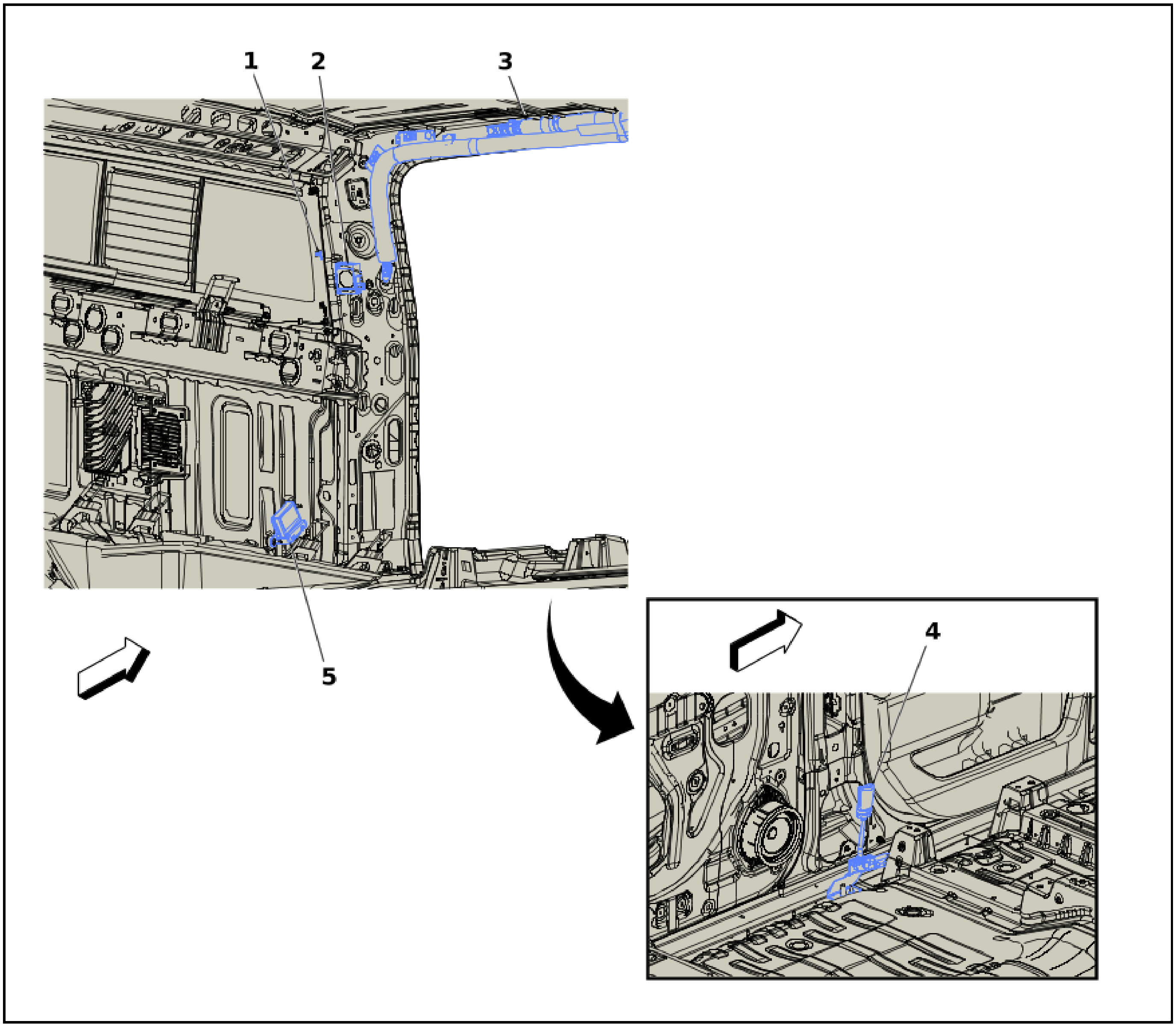
5277826

Items

(1)	K89 Immobilizer Control Module
(2)	X92 USB Receptacle

Passenger Compartment/Roof Component Views

Left Rear Passenger Compartment Components

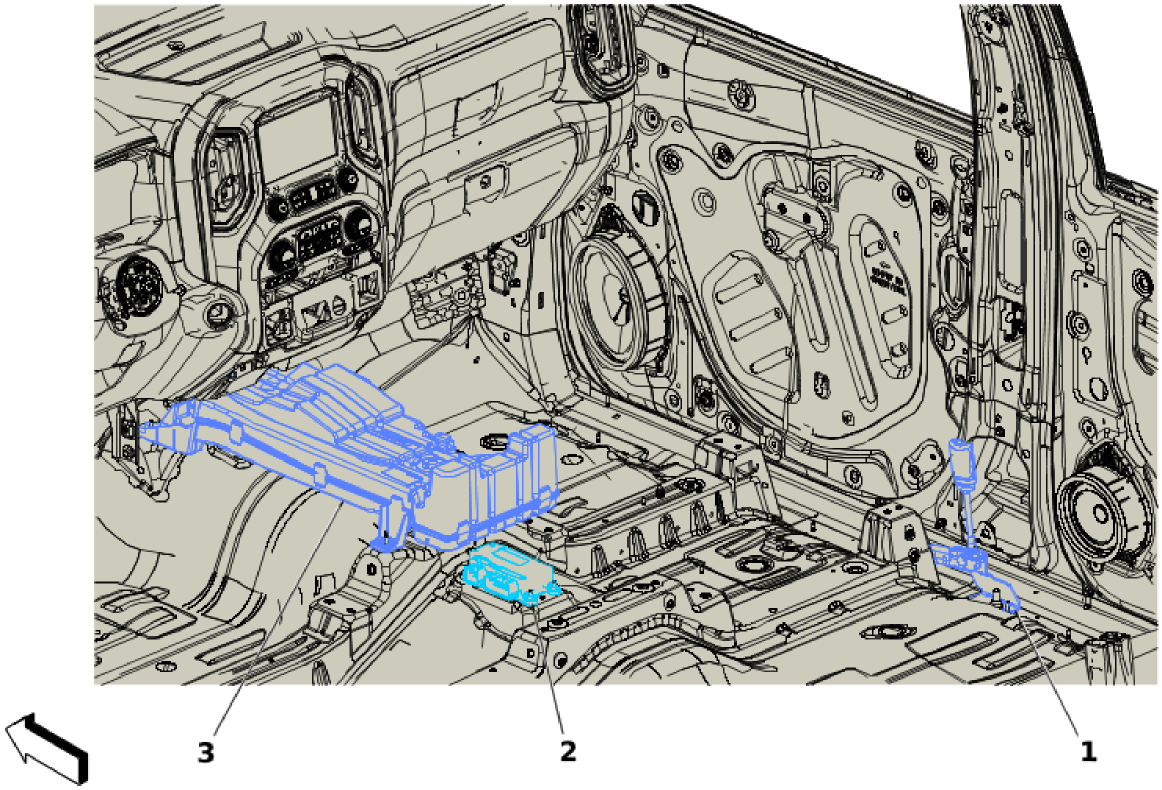


5333128

Items

(1)	E18 Rear Defogger Grid (C49)
(2)	K77 Remote Control Door Lock Receiver (AQQ)
(3)	F105L Roof Rail Air Bag - Left
(4)	F113D Seat Belt Anchor Pretensioner - Driver
(5)	K182 Parking Assist Control Module (UD5/ UD7)

Right Middle Passenger Compartment Components

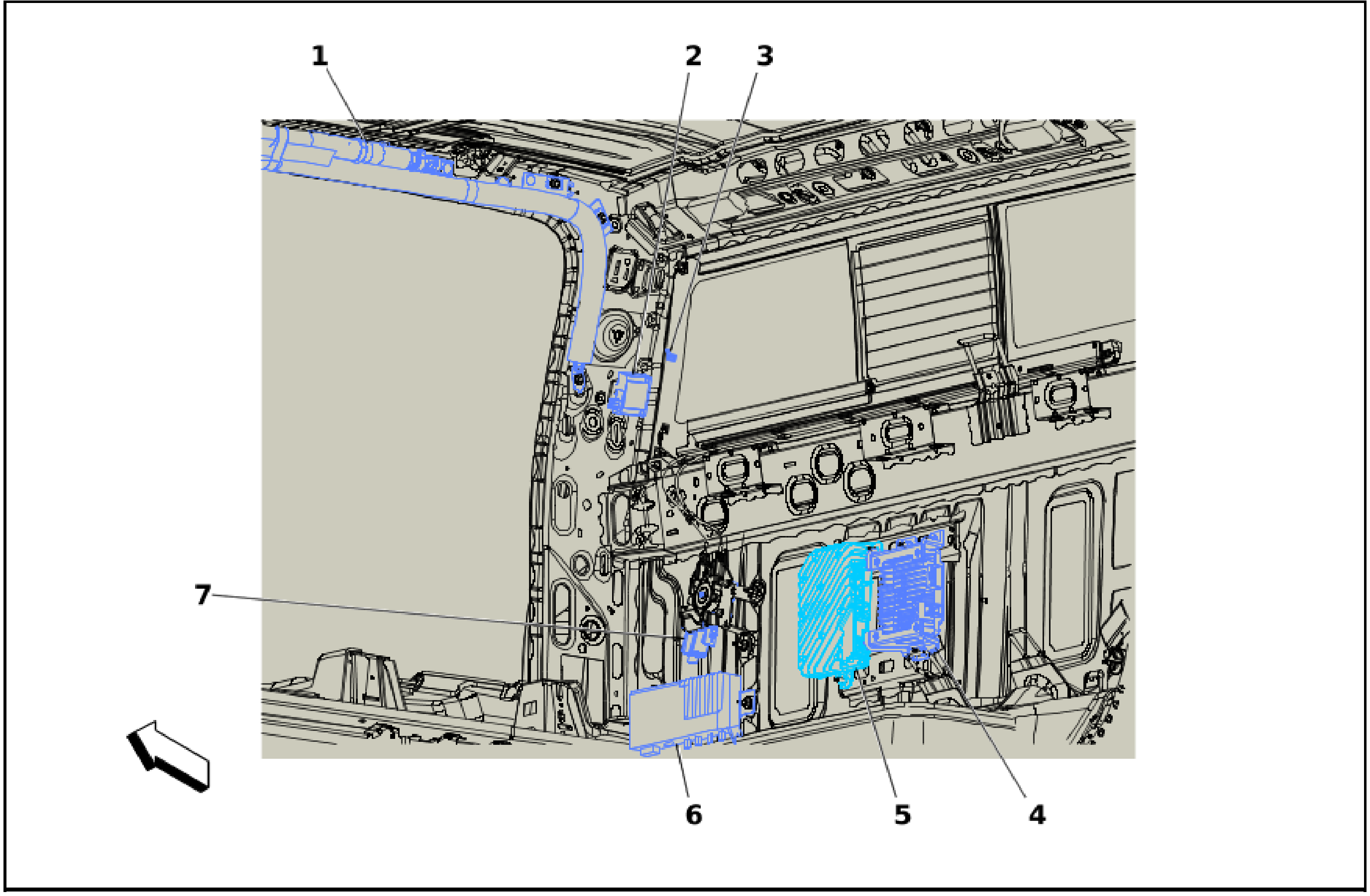


5333134

Items

(1)	F113P Seat Belt Anchor Pretensioner - Passenger
(2)	K36 Inflatable Restraint Sensing and Diagnostic Module
(3)	P19AC Speaker - Subwoofer (UQA)

Right Rear Passenger Compartment Components

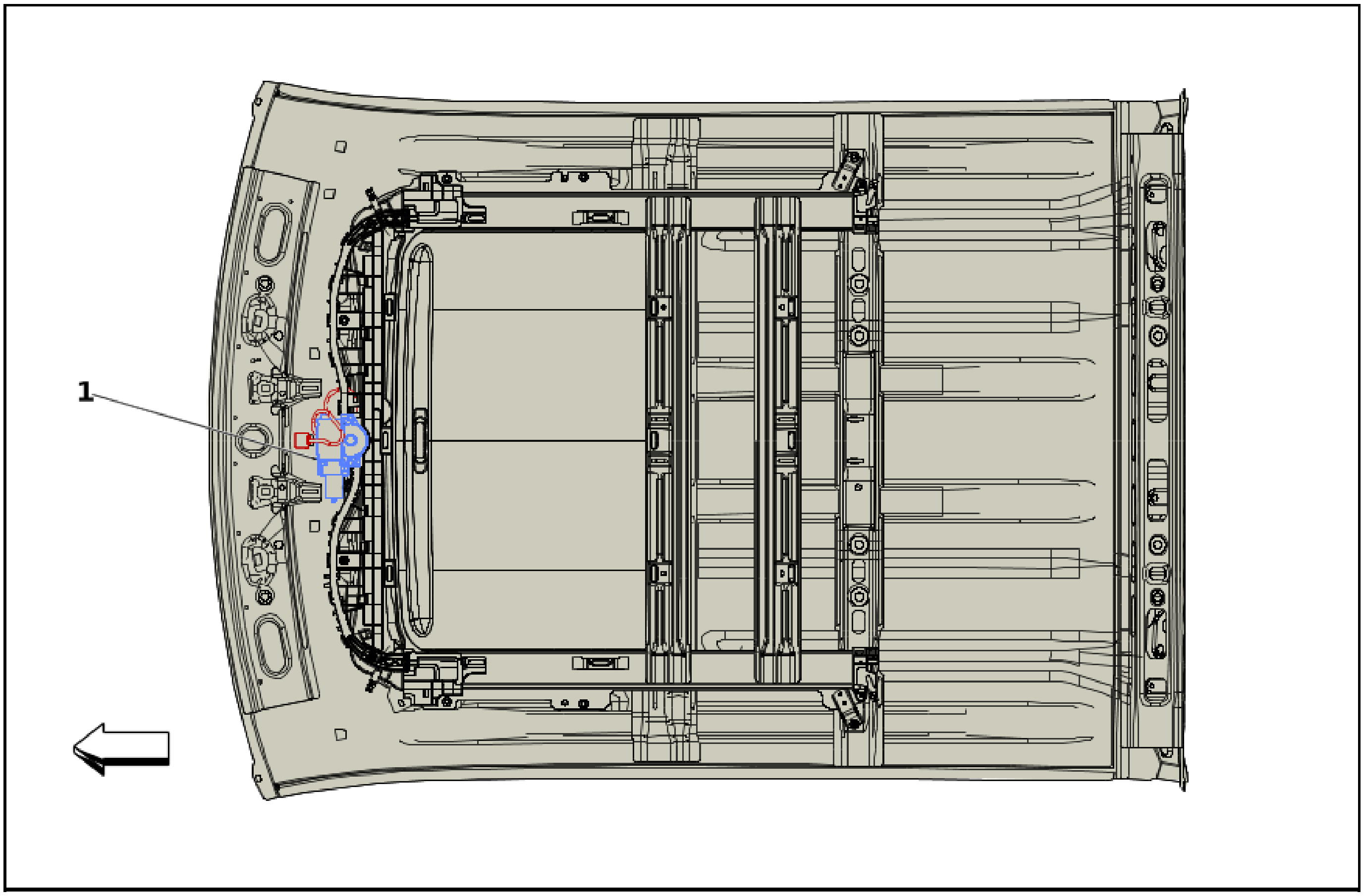


5333136

Items

(1)	F105R Roof Rail Air Bag - Right
(2)	K77 Remote Control Door Lock Receiver (AQQ)
(3)	E18 Rear Defogger Grid (C49)
(4)	T1 Accessory DC/AC Power Inverter Module (KI4/KI5)
(5)	T3 Audio Amplifier (UQA)
(6)	K157 Video Processing Control Module (UVI/UV2/UVS)
(7)	M63 Sliding Rear Window Motor (A48)

Sunroof Components (CF5)

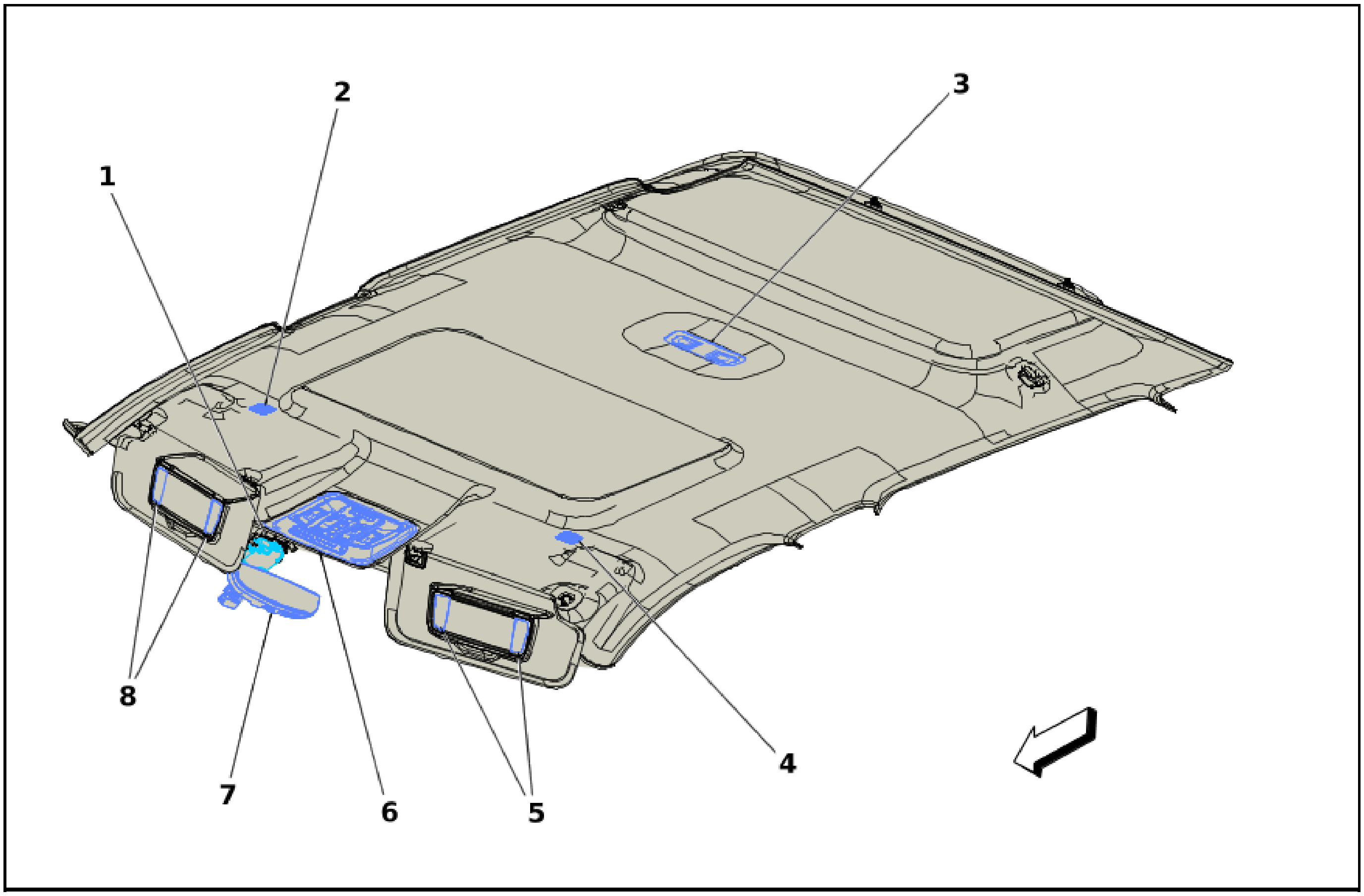


5370376

Items

(1)	M69 Sunroof Motor (CF5)

Headliner Components



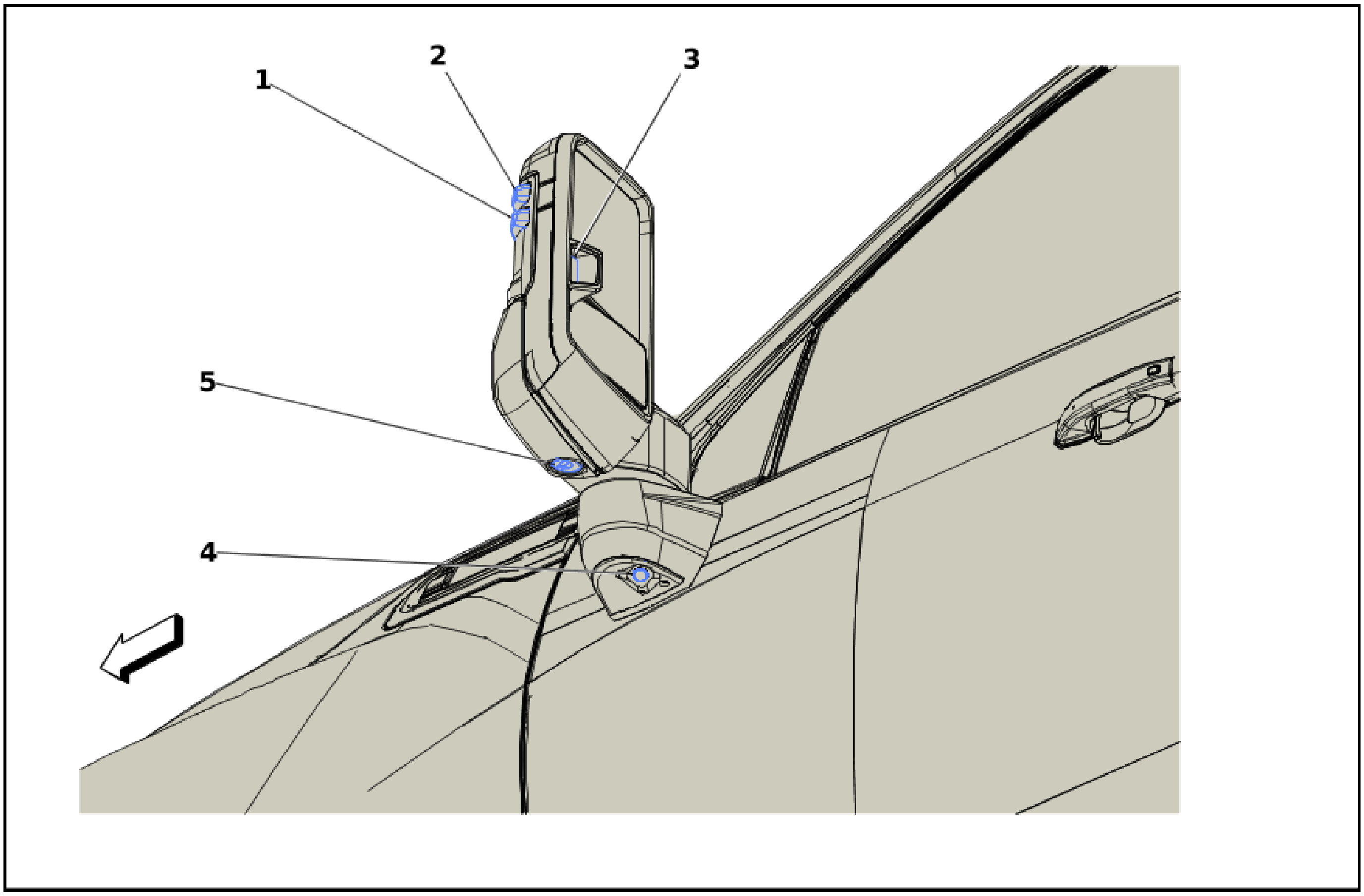
5370377

Items

(1)	B174W Frontview Camera - Windshield (UEU)
(2)	B24LF Mobile Telephone Microphone - Left Front
(3)	E37B Dome/Reading Lamps - 2nd Row (Extended Cab/Crew Cab)
(4)	B24RF Mobile Telephone Microphone - Right Front (IOS/IOT)
(5)	E31R Sunshade Mirror Lamp - Right (DH6)
(6)	A98 Front Overhead Console Assembly
(7)	A10 Inside Rearview Mirror
(8)	E31L Sunshade Mirror Lamp - Left (DH6)

Door Component Views

Left Side Mirror Components



Items

(1) E2LM Side Marker Lamp - Left Middle

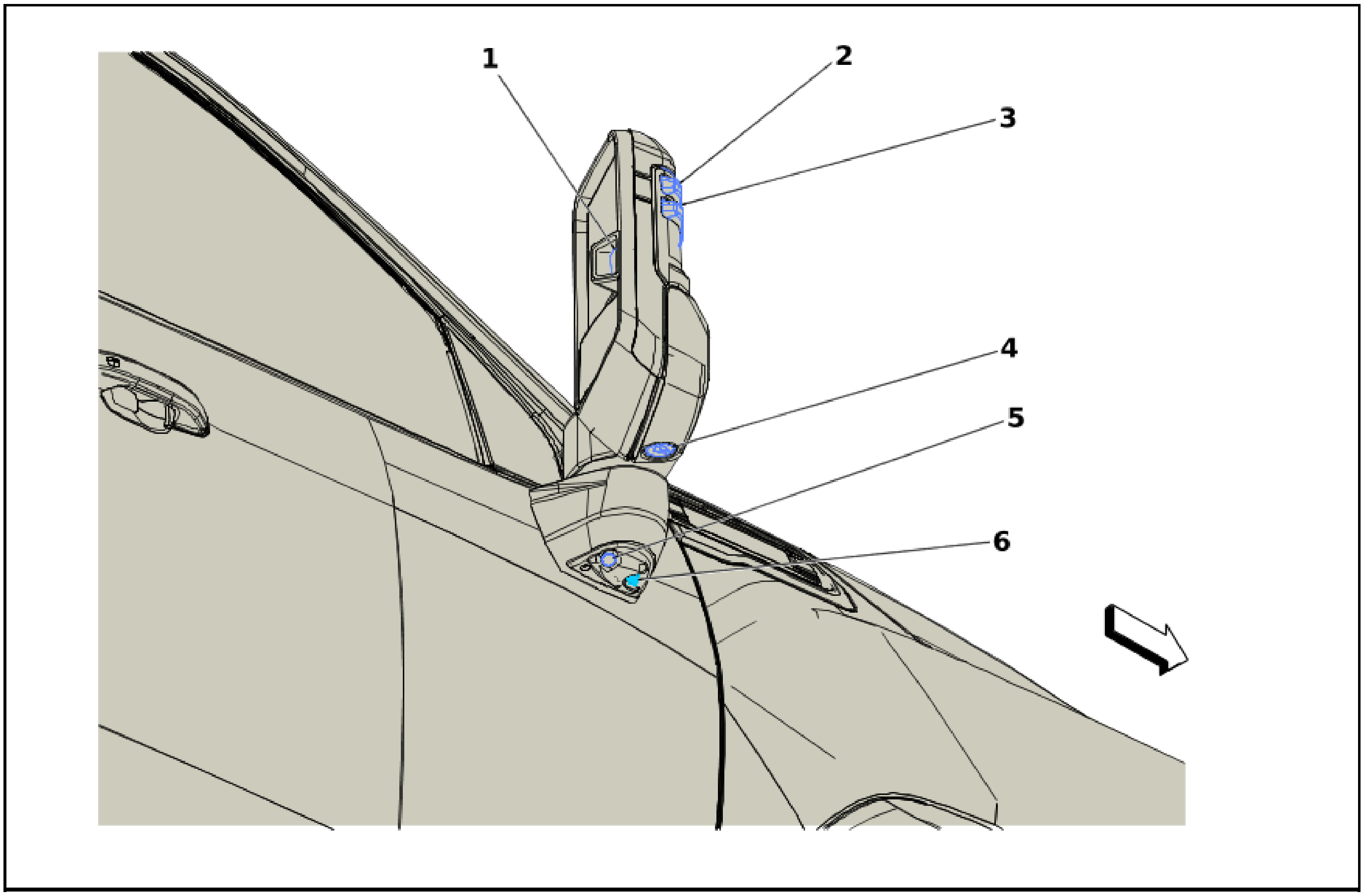
(2) E90DF Exterior Flood Lamp - Driver Outside Rearview Mirror Forward (DEZ/DLF)

(3) E70D Outside Rearview Mirror Cargo Lamp - Driver (DWI/DZC)

(4) B225L Sideview Camera - Left (UVS)

(5) E90DL Exterior Flood Lamp - Driver Outside Rearview Mirror Lower (DEZ)

Right Side Mirror Components

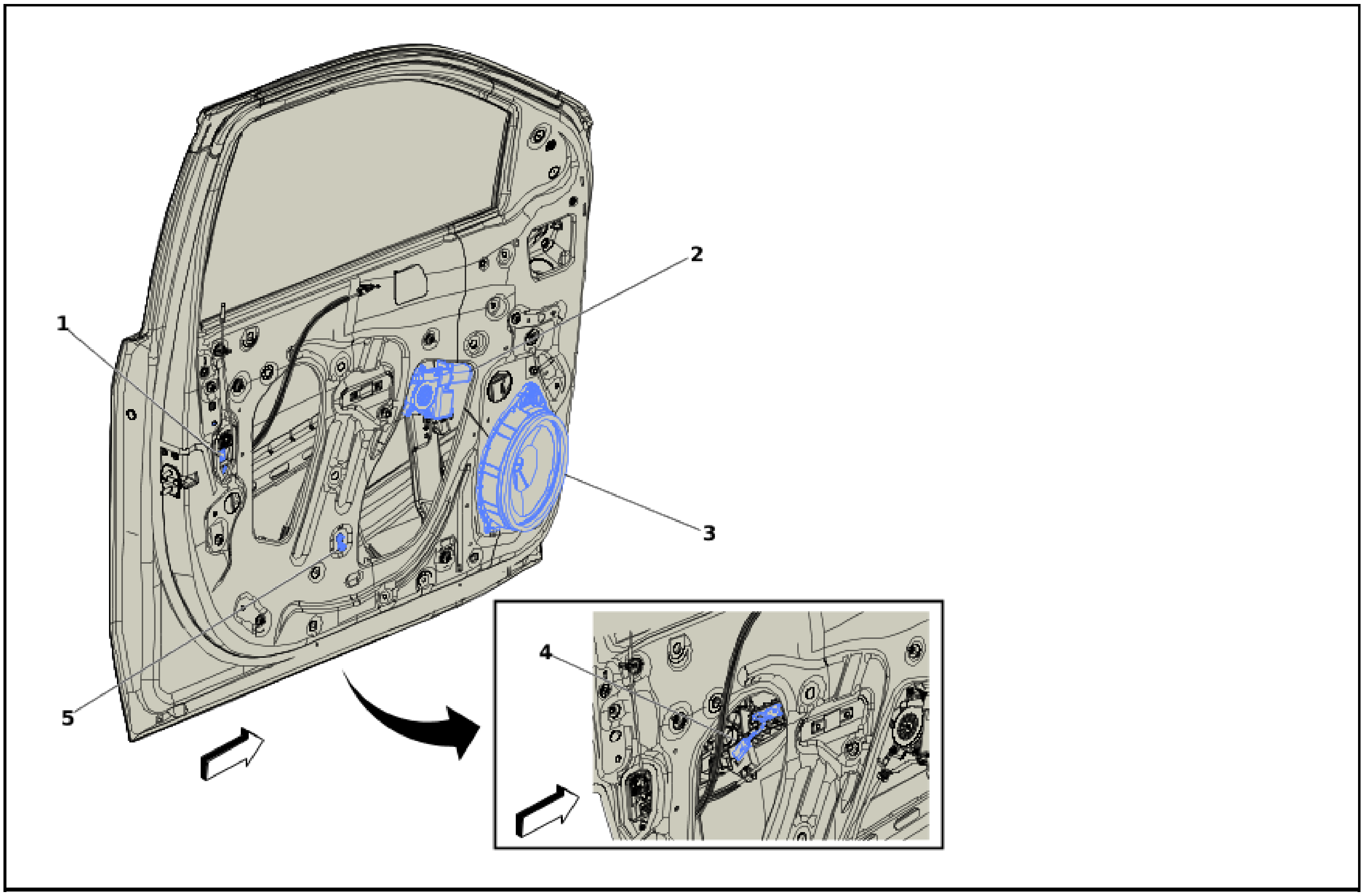


5239651

Items

(1)	E70P Outside Rearview Mirror Cargo Lamp - Passenger (DWI/DZC)
(2)	E90PF Exterior Flood Lamp - Passenger Outside Rearview Mirror Forward (DEZ/DLF)
(3)	E2RM Side Marker Lamp - Right Middle
(4)	E90PL Exterior Flood Lamp - Passenger Outside Rearview Mirror Lower (DEZ)
(5)	B225R Sideview Camera - Right (UVS)
(6)	B9D Ambient Air Temperature Sensor - Mirror

Driver Door Components

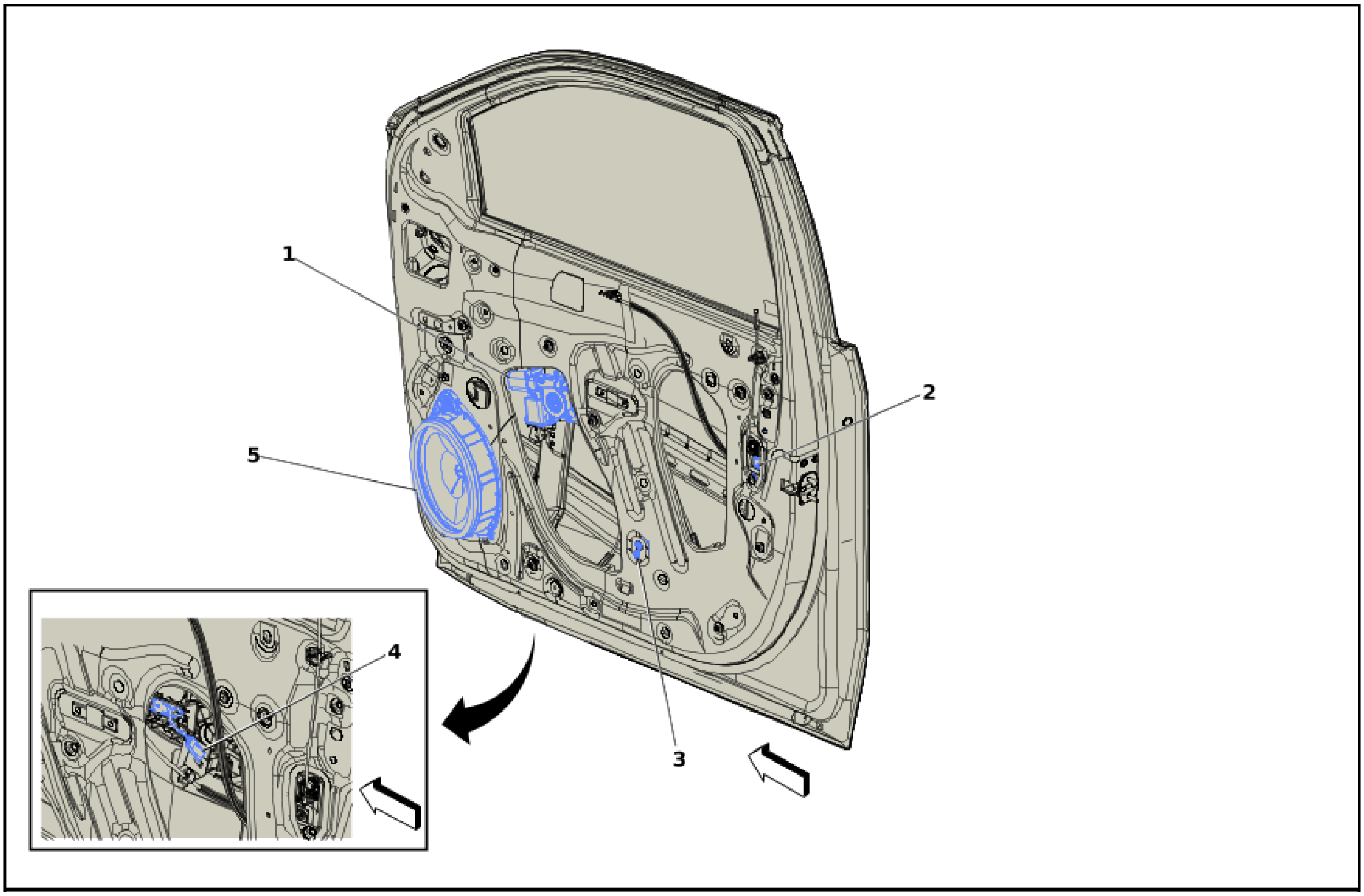


5241114

Items

(1)	A23D Door Latch Assembly - Driver
(2)	M74D Window Motor - Driver
(3)	P19AG Speaker - Left Front Door
(4)	A24D Door Handle Assembly - Driver Exterior
(5)	B63LF Side Impact Sensor - Left Front

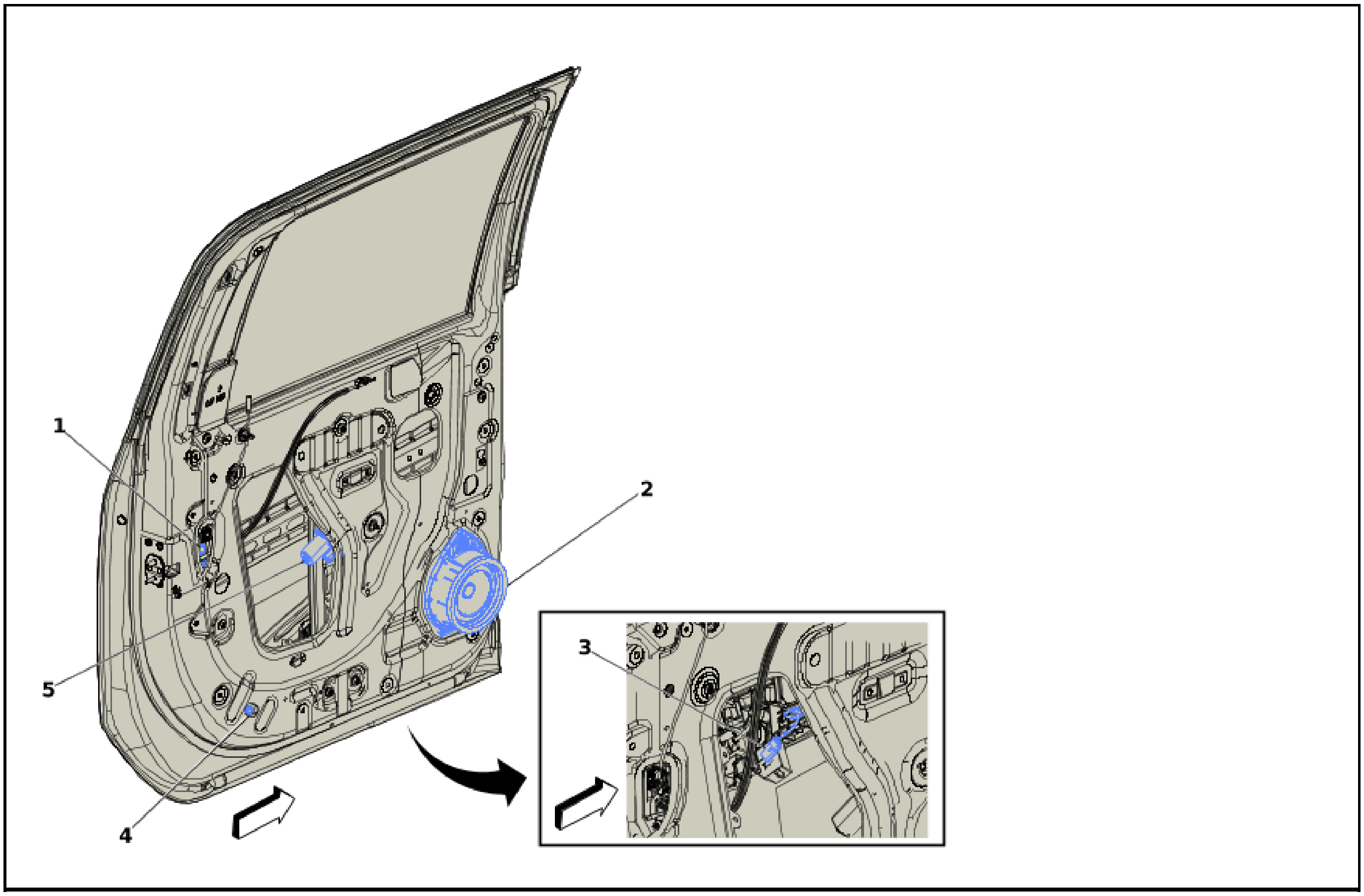
Passenger Door Components



5241116

Items	
(1)	M74P Window Motor - Passenger
(2)	A23P Door Latch Assembly - Passenger
(3)	B63RF Side Impact Sensor - Right Front
(4)	A24P Door Handle Assembly - Passenger Exterior
(5)	P19AH Speaker - Right Front Door

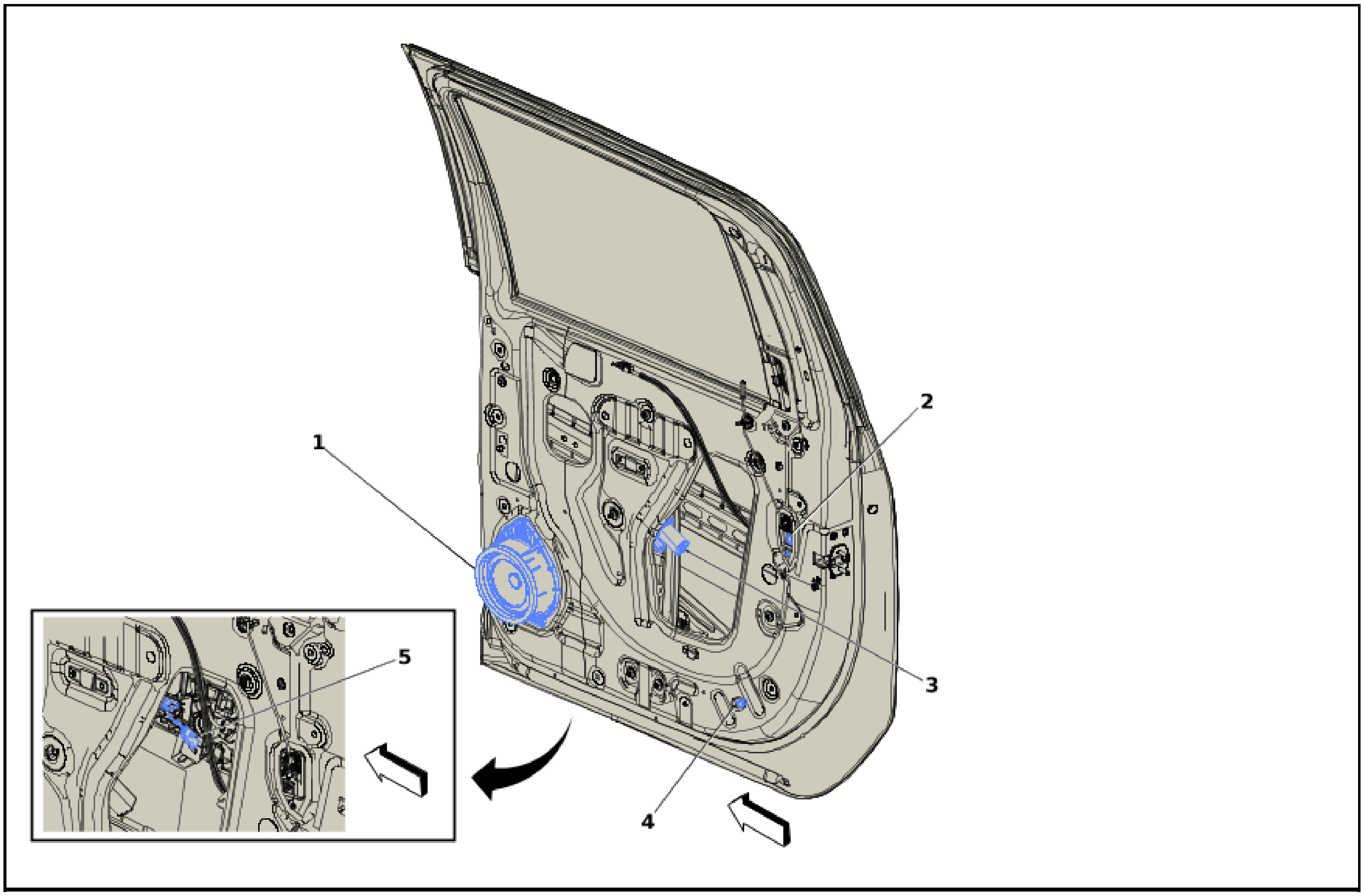
Left Rear Door Components (Crew/Extended Cab)



Items

(1)	A23LR Door Latch Assembly - Left Rear (Extended Cab/Crew Cab)
(2)	P19AL Speaker - Left Rear Door (Crew/extended Cab)
(3)	A24LR Door Handle Assembly - Left Rear Exterior (Extended Cab/Crew Cab)
(4)	B63LR Side Impact Sensor - Left Rear (Extended Cab/Crew Cab)
(5)	M74LR Window Motor - Left Rear (Extended Cab/Crew Cab)

Right Rear Door Components (Crew/Extended Cab)



5241125

Items

(1) P19AM Speaker - Right Rear Door (Crew/Extended Cab)

(2) A23RR Door Latch Assembly - Right Rear (Extended Cab/Crew Cab)

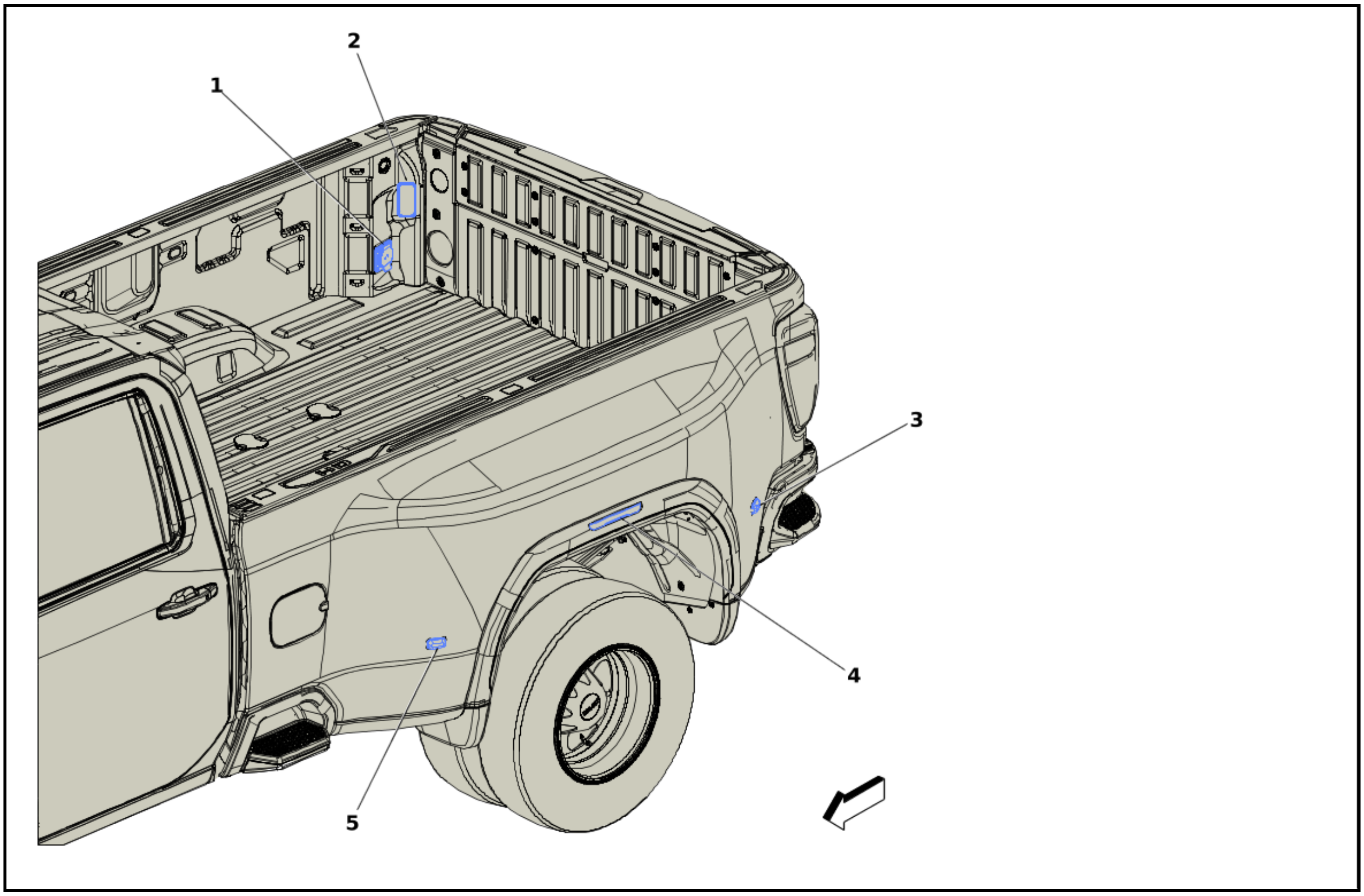
(3) M74RR Window Motor - Right Rear (Extended Cab/Crew Cab)

(4) B63RR Side Impact Sensor - Right Rear (Extended Cab/Crew Cab)

(5) A24RR Door Handle Assembly - Right Rear Exterior (Extended Cab/Crew Cab)

Luggage Compartment/Rear of Vehicle Component Views

Left Rear of Vehicle Components

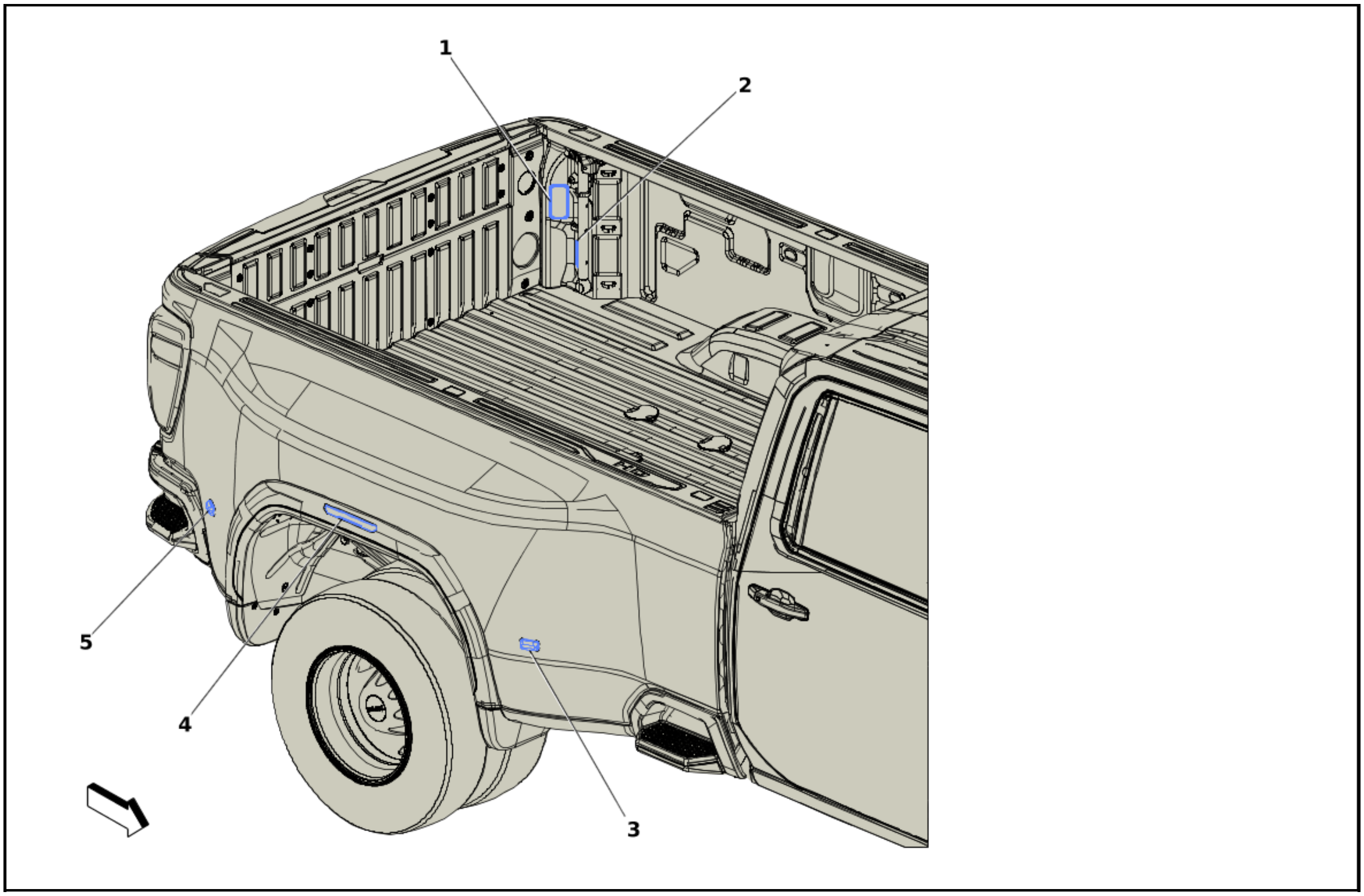


5239652

Items

(1)	X80C Accessory Power Receptacle - Cargo (KC9/KCA)
(2)	E33R Cargo Lamp - Right (UF3)
(3)	E3LR Rear Fender Clearance Lamp - Left Rear (DZW)
(4)	E96FL Rear Side Marker Lamp - Left Fender (Z88)
(5)	E3LF Rear Fender Clearance Lamp - Left Front (DZW)

Right Rear of Vehicle Components



5239653

Items

(1) E33L Cargo Lamp - Left (UF2)

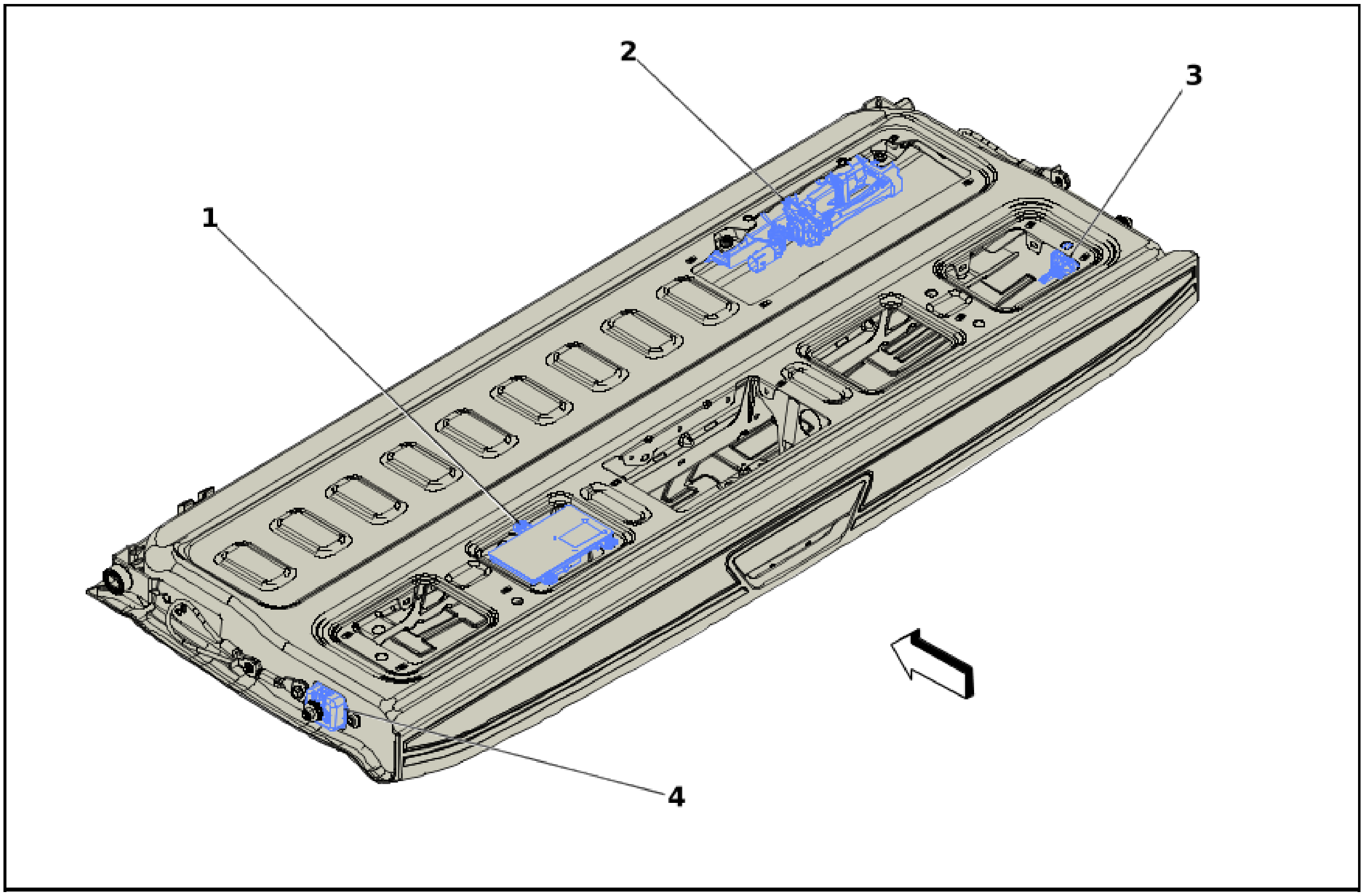
(2) X88G Trailer Connector - 5th Wheel

(3) E3RF Rear Fender Clearance Lamp - Right Front (DZW)

(4) E96FR Rear Side Marker Lamp - Right Fender (Z88)

(5) E3RR Rear Fender Clearance Lamp - Right Rear (DZW)

Endgate Components (X88)



5236896

Items

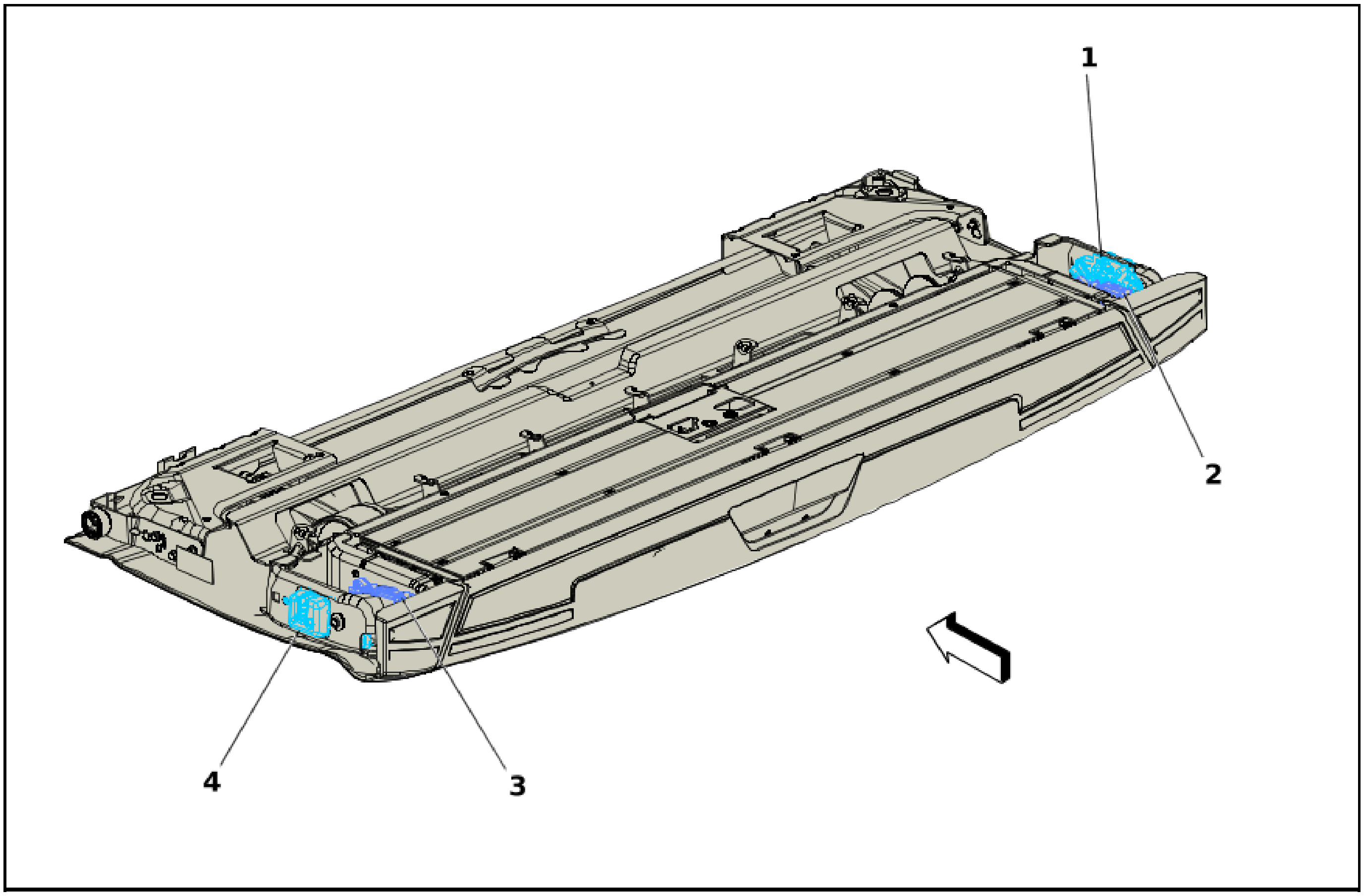
(1) K194 Rear Gate Module (QT6)

(2) M125 Pickup Box Endgate Power Assist Actuator (QT6)

(3) A99R Pickup Box Endgate Latch - Right (QK2/QT6)

(4) A99L Pickup Box Endgate Latch - Left (QK2/QT6)

Endgate Components (Z88)

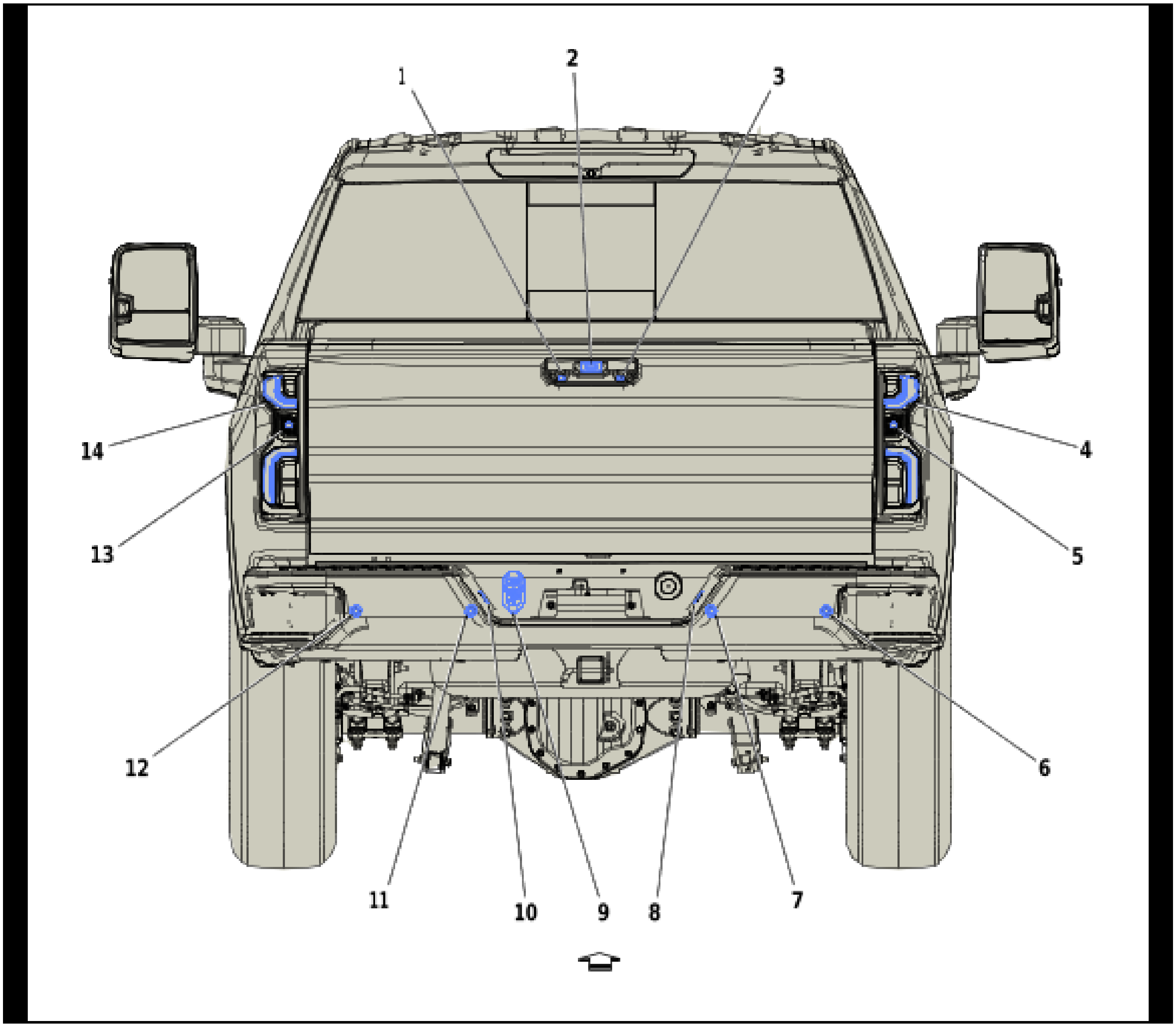


5236897

Items

(1)	A99R Pickup Box Endgate Latch - Right (QK2/QT6)
(2)	A100R Pickup Box Auxiliary Endgate Latch - Right (QK2)
(3)	A100L Pickup Box Auxiliary Endgate Latch - Left (QK2)
(4)	A99L Pickup Box Endgate Latch - Left (QK2/ QT6)

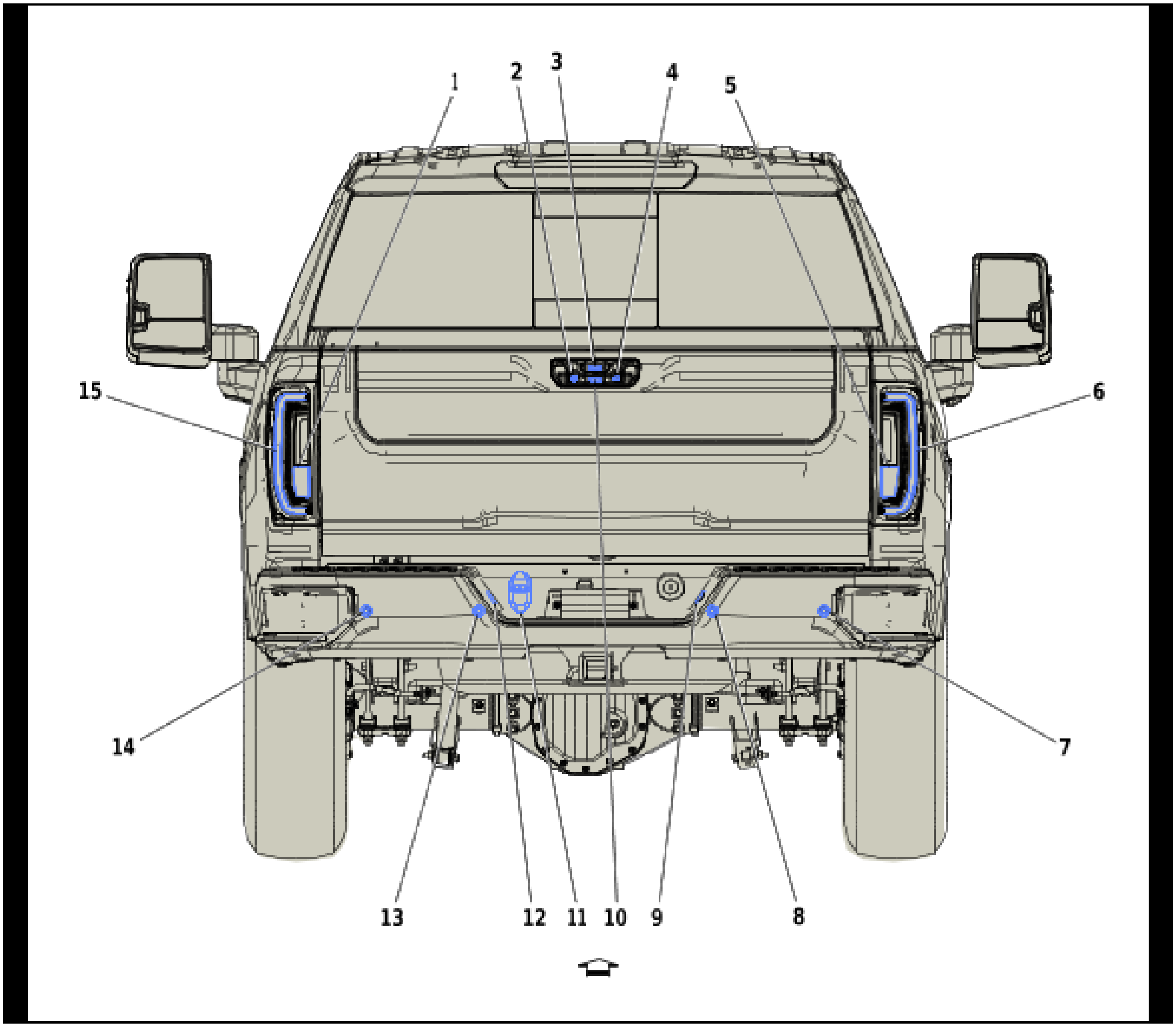
Rear of Vehicle Components (X88)



Items

(1)	B87 Rearview Camera (UVB/UVC/UV2/UVI)
(2)	S157 Pickup Box Endgate Unlatch Switch (QT5)
(3)	E8L Liftgate Courtesy Lamp (QT5/QT6)
(4)	E42R Tail Lamp Assembly - Right
(5)	E5B Backup Lamp - Right
(6)	B306H Parking Assist Sensor - Rear Right Outer (UD5/UD7)
(7)	B306G Parking Assist Sensor - Rear Right Middle (UD5/UD7)
(8)	E7R License Plate Lamp - Right (E63)
(9)	X88 Trailer Connector
(10)	E7L License Plate Lamp - Left (E63)
(11)	B306F Parking Assist Sensor - Rear Left Middle (UD5/UD7)
(12)	B306E Parking Assist Sensor - Rear Left Outer (UD5/UD7)
(13)	E5A Backup Lamp - Left
(14)	E42L Tail Lamp Assembly - Left

Rear of Vehicle Components (Z88)

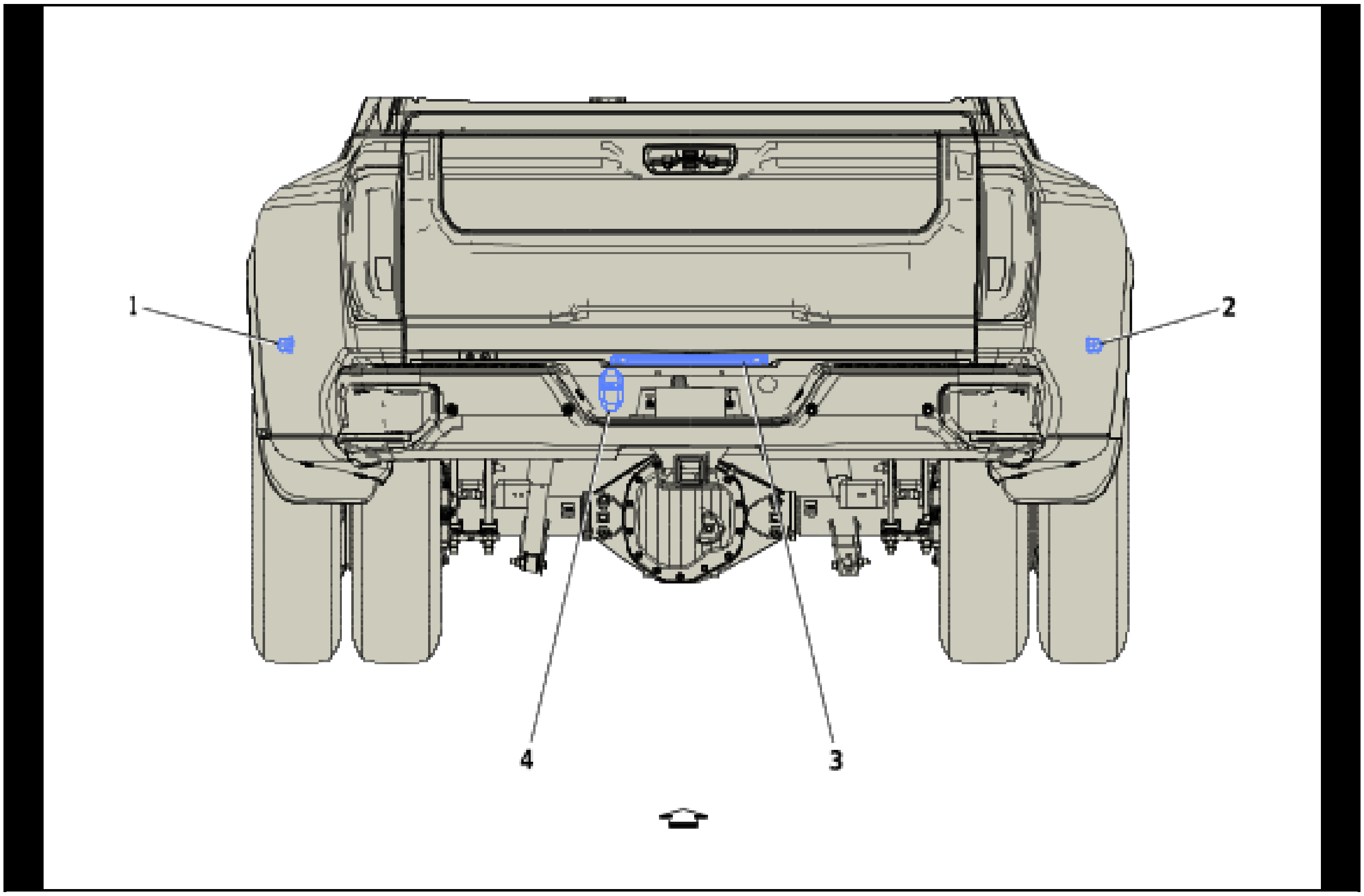


5236899

Items

(1)	E5A Backup Lamp - Left
(2)	B87 Rearview Camera (UVB/UVC/UV2/UVI)
(3)	S159E Pickup Box Endgate Control Switch - Exterior (QT6)
(4)	E8L Liftgate Courtesy Lamp (QT5/QT6)
(5)	E5B Backup Lamp - Right
(6)	E42R Tail Lamp Assembly - Right
(7)	B306H Parking Assist Sensor - Rear Right Outer (UD5/UD7)
(8)	B306G Parking Assist Sensor - Rear Right Middle (UD5/UD7)
(9)	E7R License Plate Lamp - Right (E63)
(10)	S157 Pickup Box Endgate Unlatch Switch (QT5)
(11)	X88 Trailer Connector
(12)	E7L License Plate Lamp - Left (E63)
(13)	B306F Parking Assist Sensor - Rear Left Middle (UD5/UD7)
(14)	B306E Parking Assist Sensor - Rear Left Outer (UD5/UD7)
(15)	E42L Tail Lamp Assembly - Left

Rear of Vehicle Components (DZW)

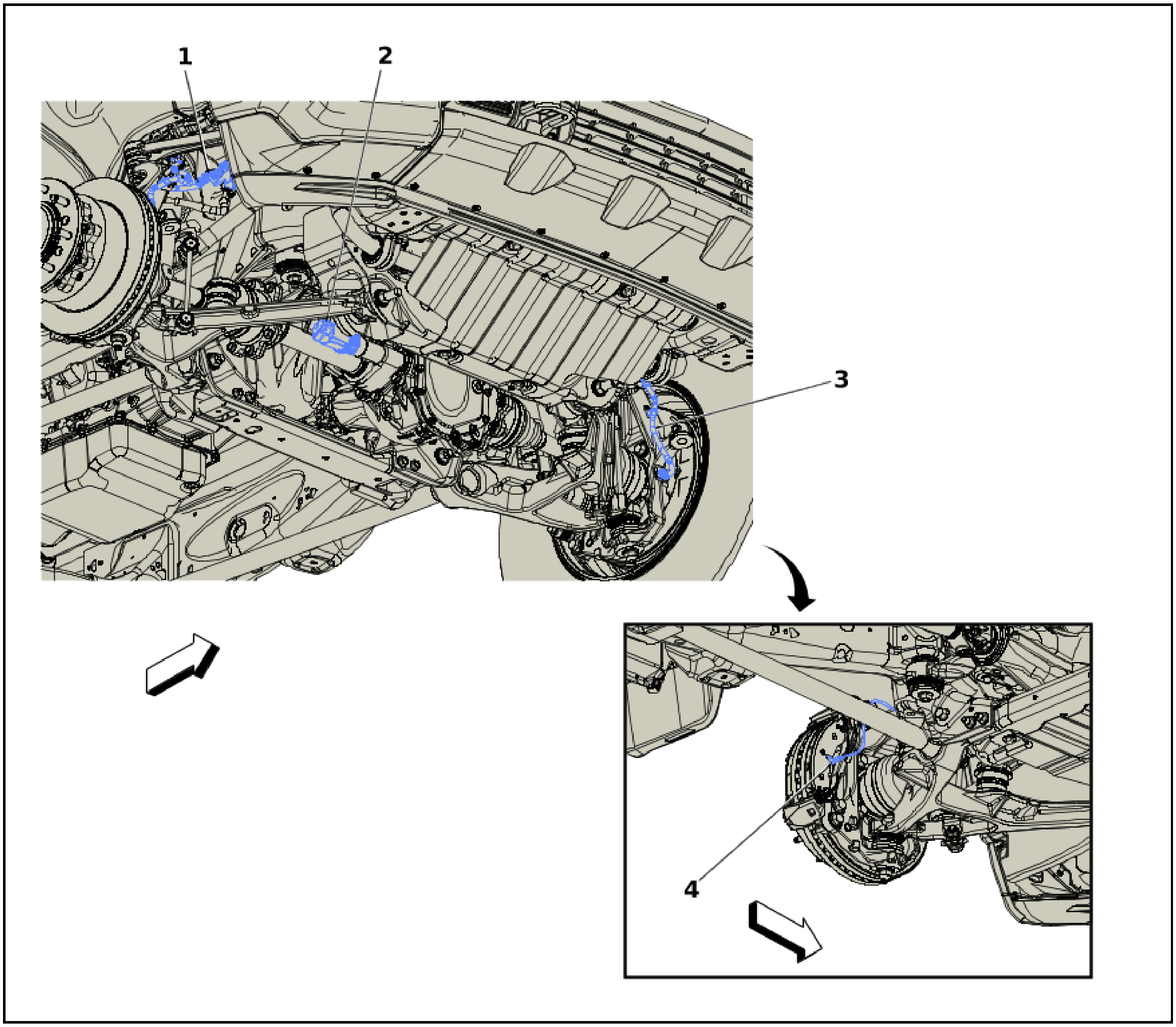


Items

(1)	E3LR Rear Fender Clearance Lamp - Left Rear (DZW)
(2)	E3RR Rear Fender Clearance Lamp - Right Rear (DZW)
(3)	E2A Marker Lamp - Endgate (QT5/QT6)
(4)	X88 Trailer Connector

Wheels/Vehicle Underbody Component Views

Underbody Components - Front

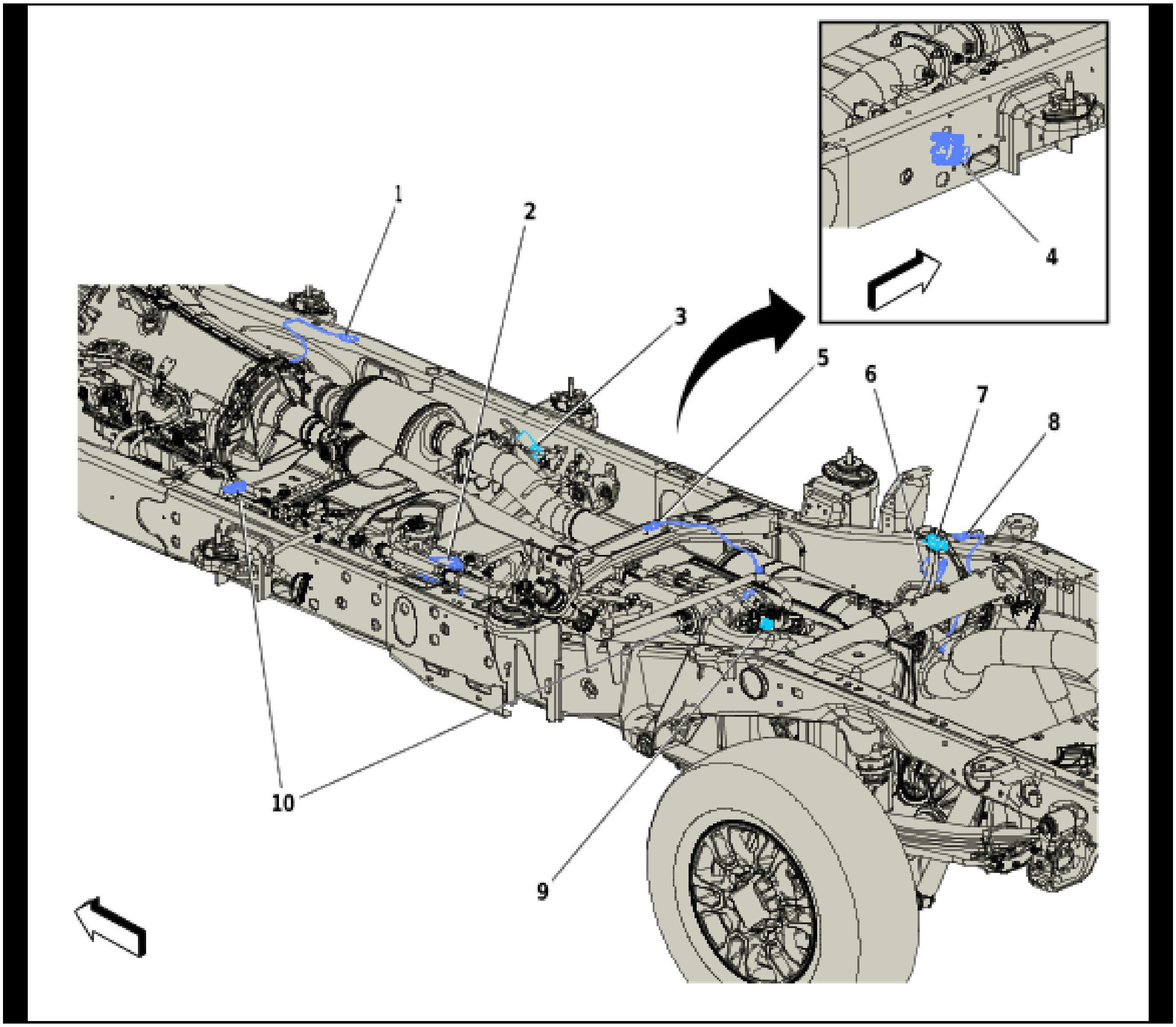


5275644

Items

(1)	B5RF Wheel Speed Sensor - Right Front
(2)	M26 Front Axle Engagement Actuator
(3)	B5LF Wheel Speed Sensor - Left Front
(4)	B172LF Brake Pad Wear Sensor - Left Front

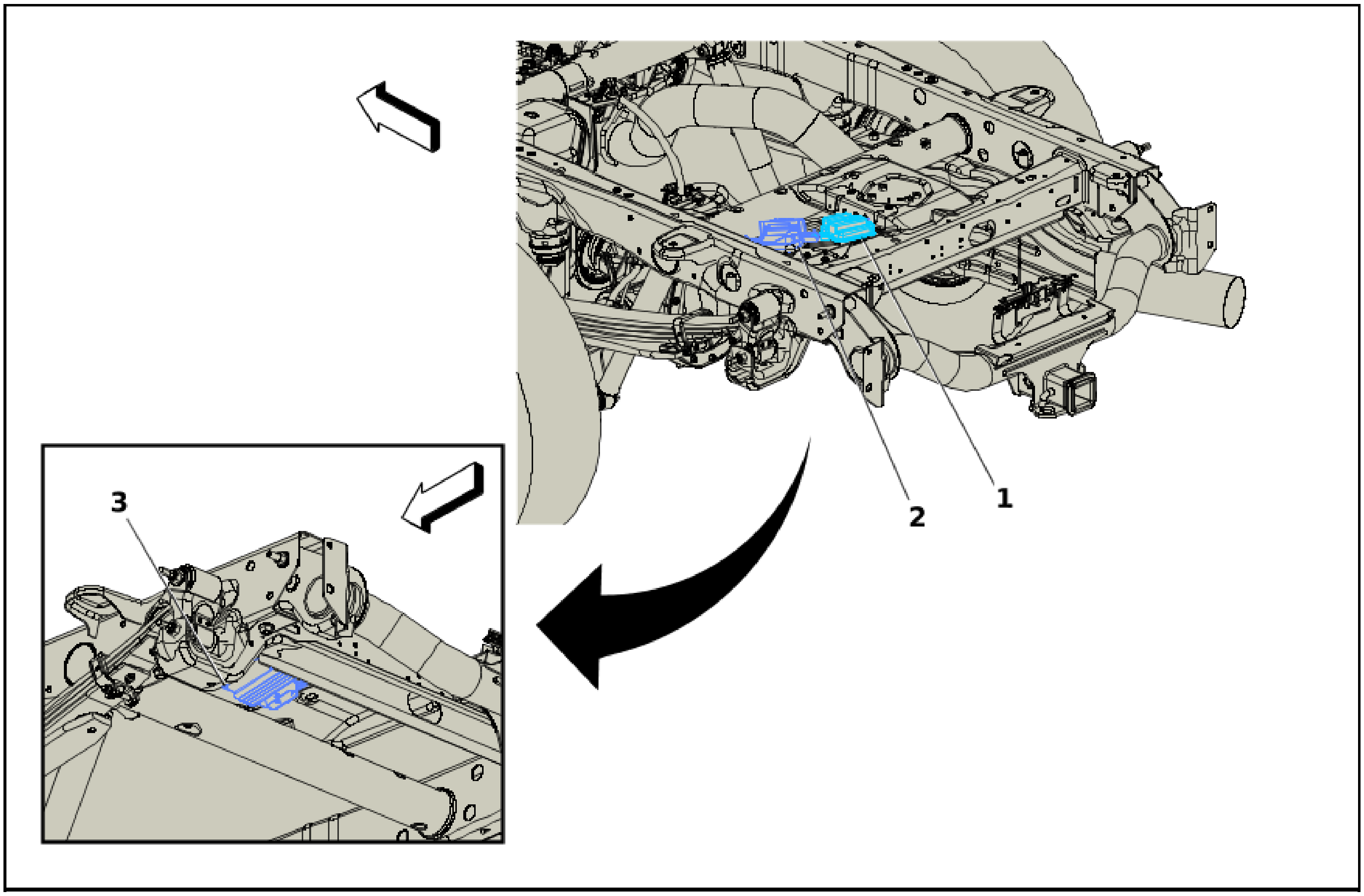
Underbody Components - Middle



Items

(1)	B131C Exhaust Temperature Sensor 3 (L5P)
(2)	E11A Fuel Heater/Water in Fuel Sensor (L5P)
(3)	Q67 Exhaust Aftertreatment Fuel Injector (L5P)
(4)	B195B Nitrogen Oxides Sensor 2 (L5P)
(5)	B131D Exhaust Temperature Sensor 4 (L5P)
(6)	B136 Exhaust Particulate Matter Sensor (L5P)
(7)	B154 Diesel Particulate Filter Exhaust Differential Pressure Sensor (L5P)
(8)	B131E Exhaust Temperature Sensor 5 (L5P)
(9)	A6C Fuel Pump and Level Sensor Assembly - Primary
(10)	B47 Fuel Pressure Sensor

Underbody Components - Left Rear

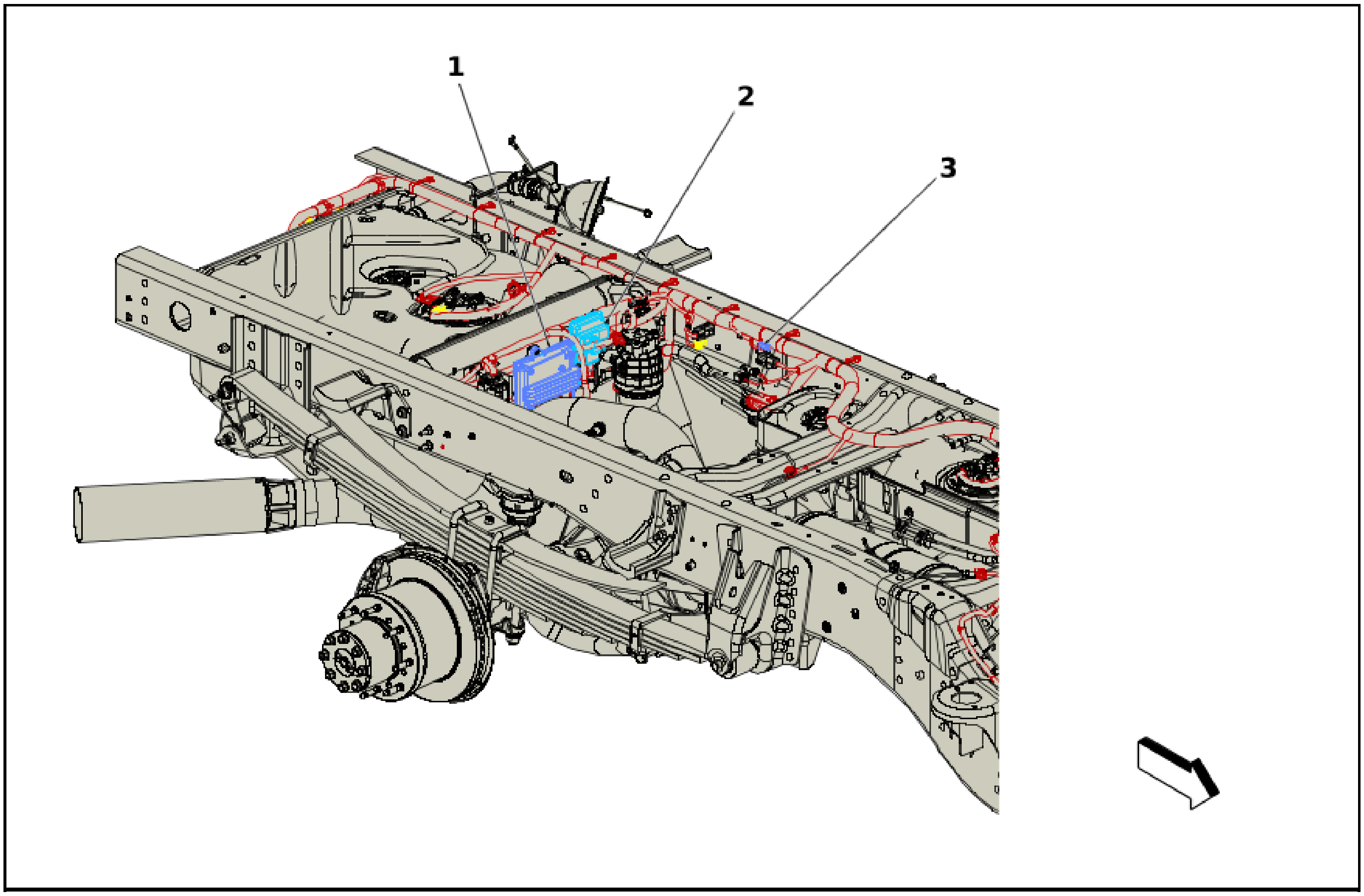


5275646

Items

(1)	K133 Trailer Brake Power Control Module (JL1)
(2)	K111 Fuel Pump Driver Control Module
(3)	K38A Chassis Control Module - Auxiliary

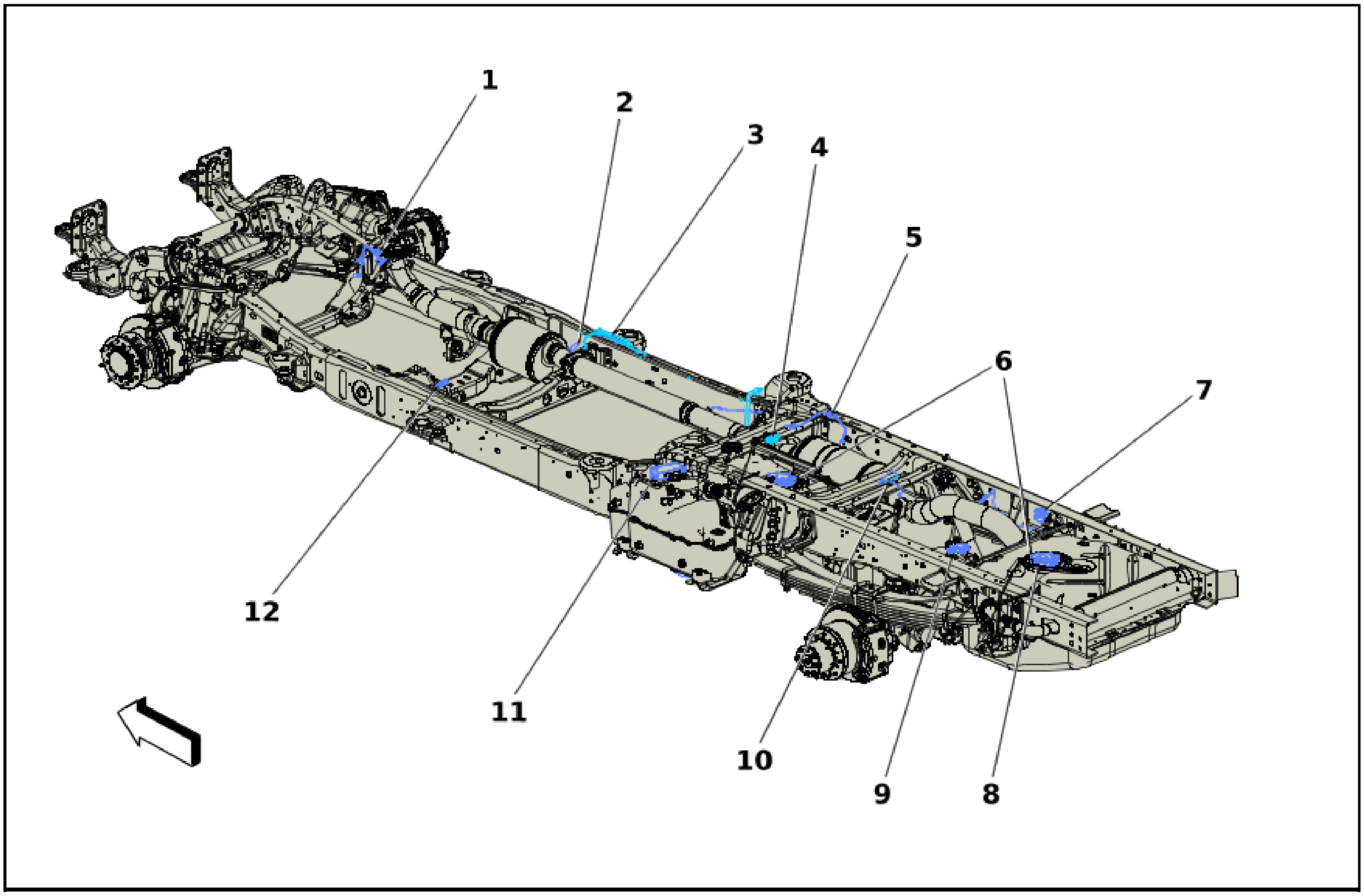
Underbody Components - Left Rear (Chassis Cab)



5370378

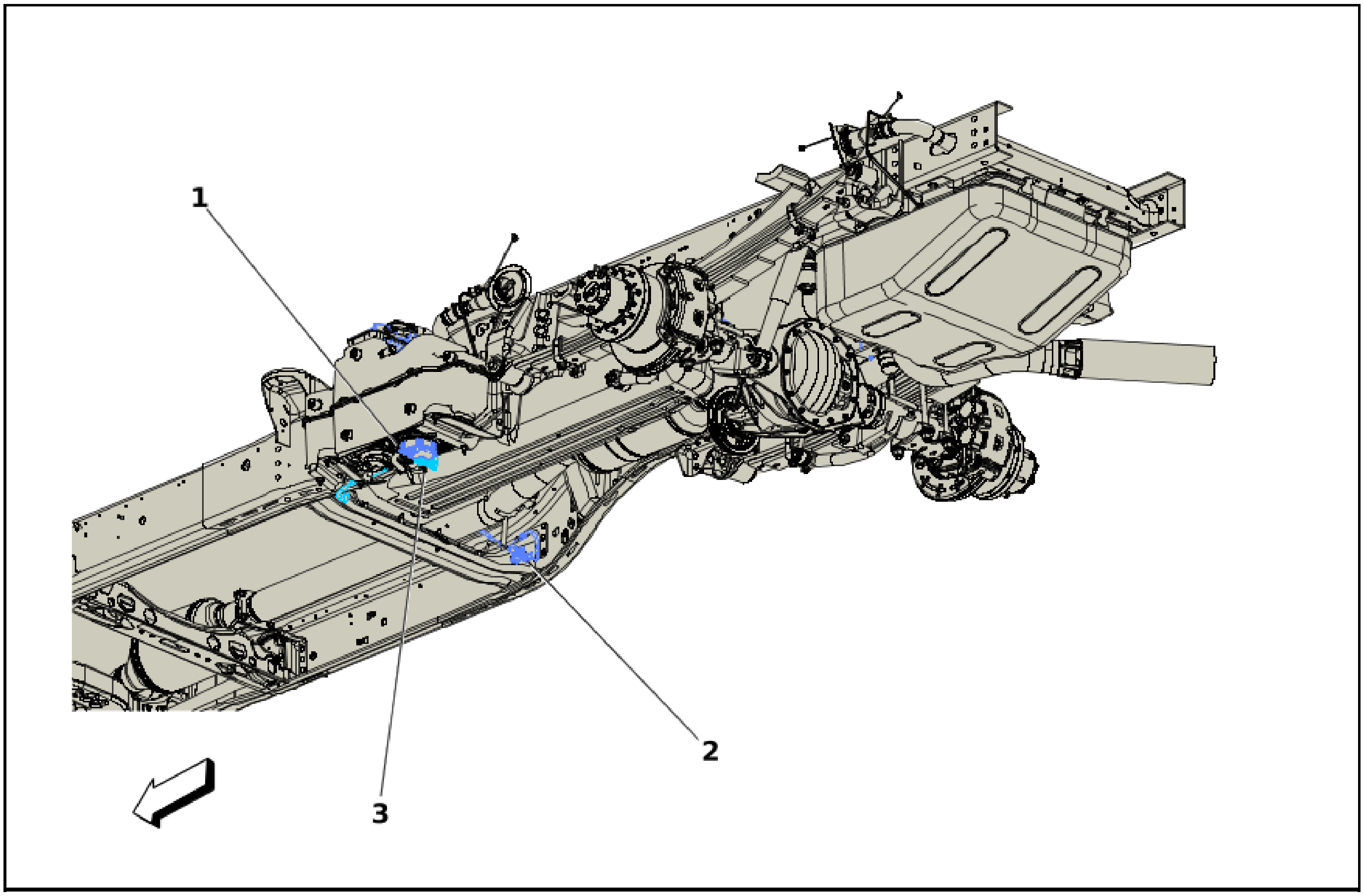
Items	
(1)	K38A Chassis Control Module - Auxiliary
(2)	K133 Trailer Brake Power Control Module (JL1)
(3)	R6A Terminating Resistor - High Speed Bus

Underbody Components - Right Rear (Chassis Cab)



5370379

Underbody Components - DEF Tank (L5P)

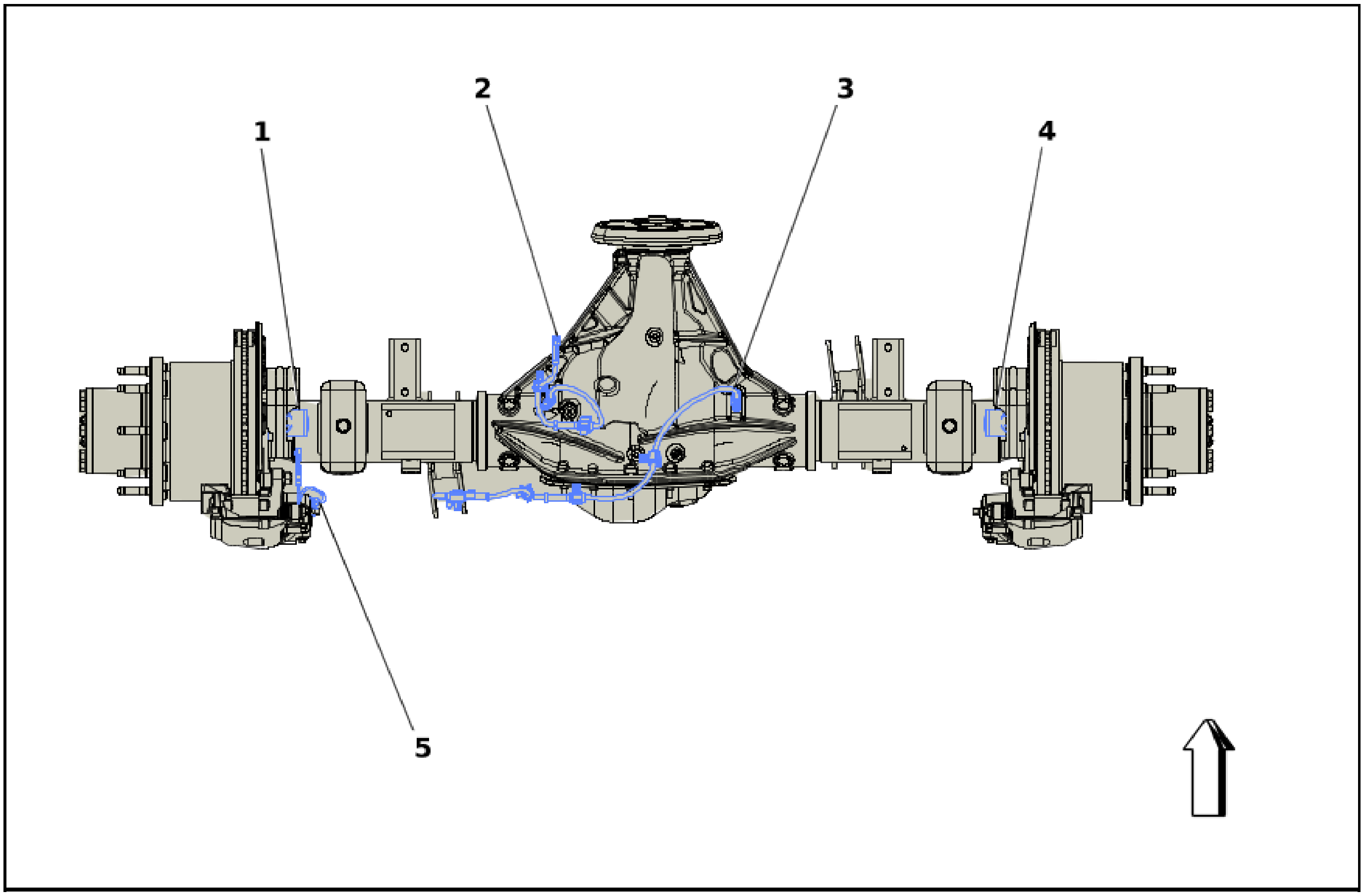


5370380

Items

(1)	G33 Reductant Pump (L5P)
(2)	Q47 Exhaust Gas Recirculation Cooler By-pass Solenoid Valve
(3)	E53 Reductant Tank Heater (L5P)

Rear Axle Components (DZW)



Items

(1) M104L Park Brake Actuator - Left

(2) B5LR Wheel Speed Sensor - Left Rear

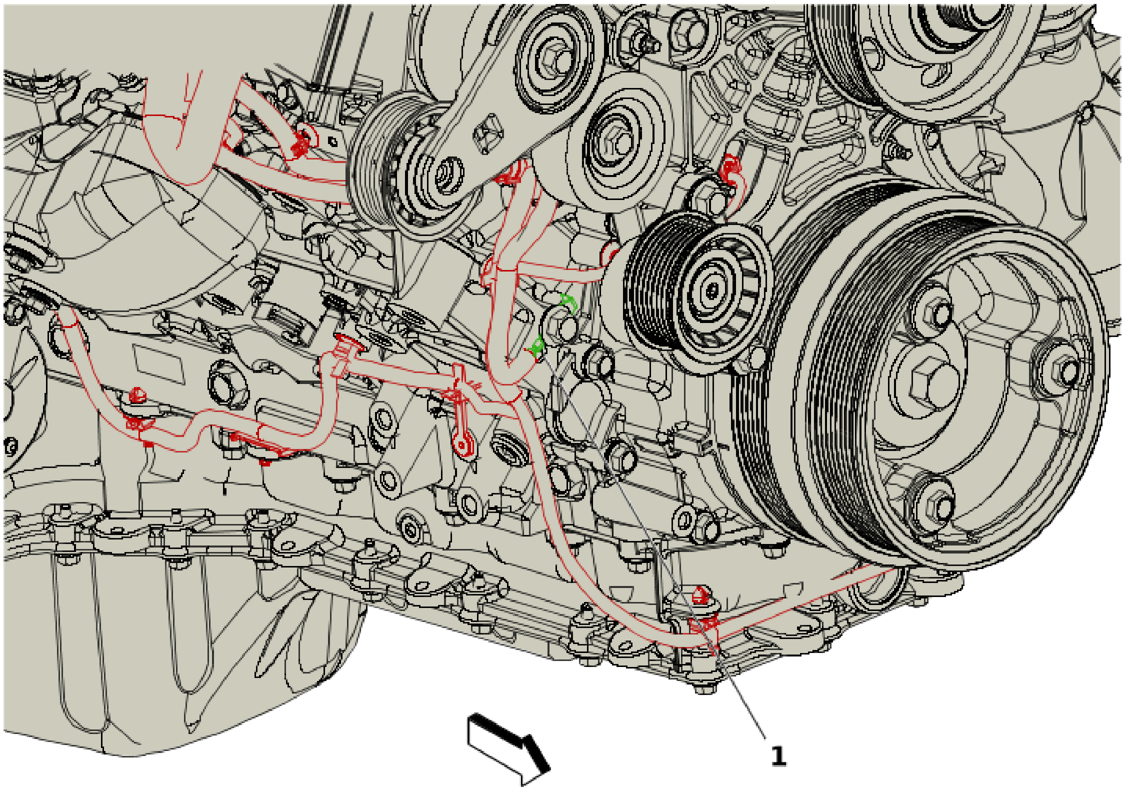
(3) B5RR Wheel Speed Sensor - Right Rear

(4) M104R Park Brake Actuator - Right

(5) B172LR Brake Pad Wear Sensor - Left Rear

Ground Views

G102 (L5P)

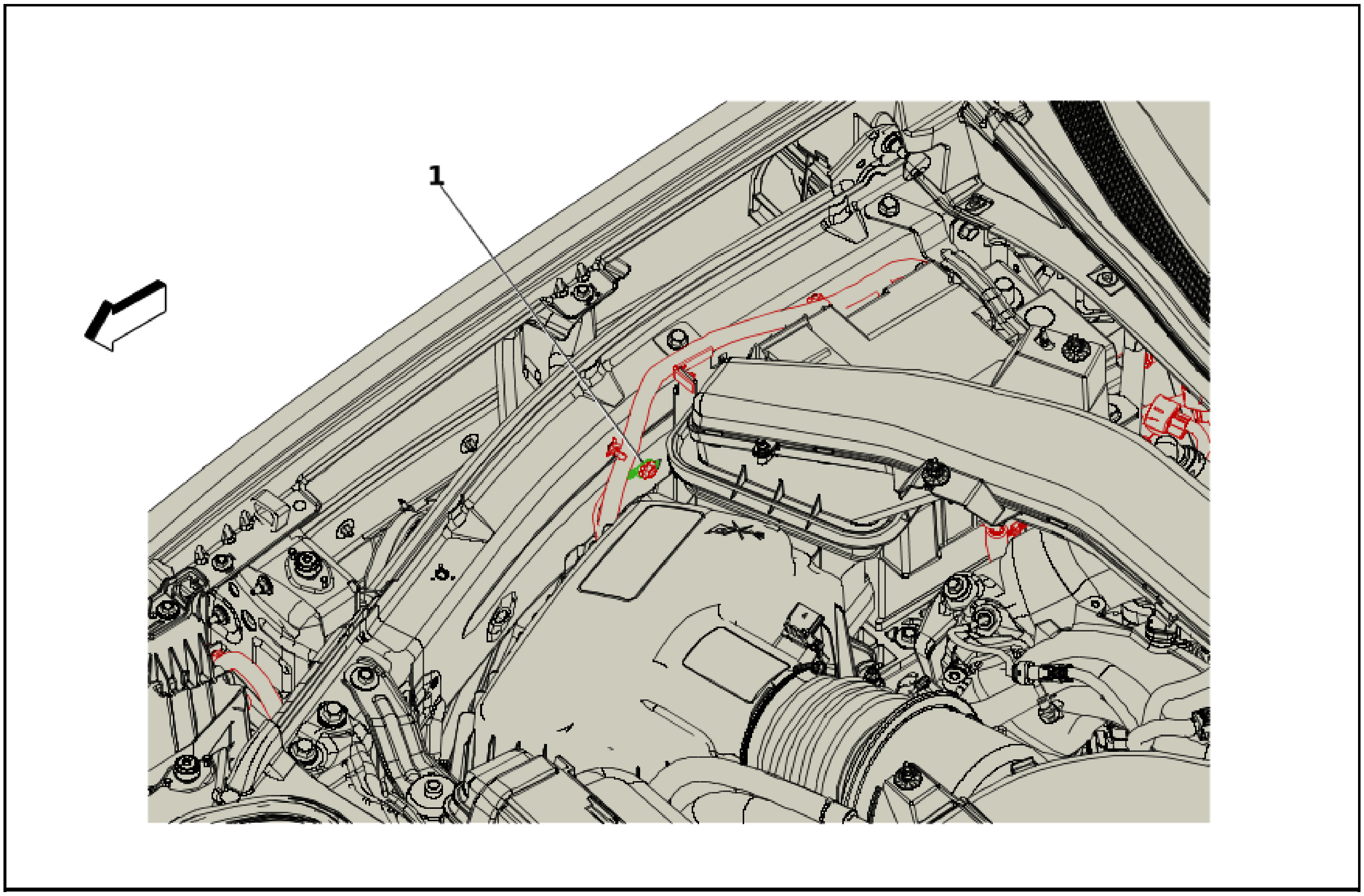


5218906

Items

(1)	G102 Glow Plug Jumper Harness (L5P)

G120

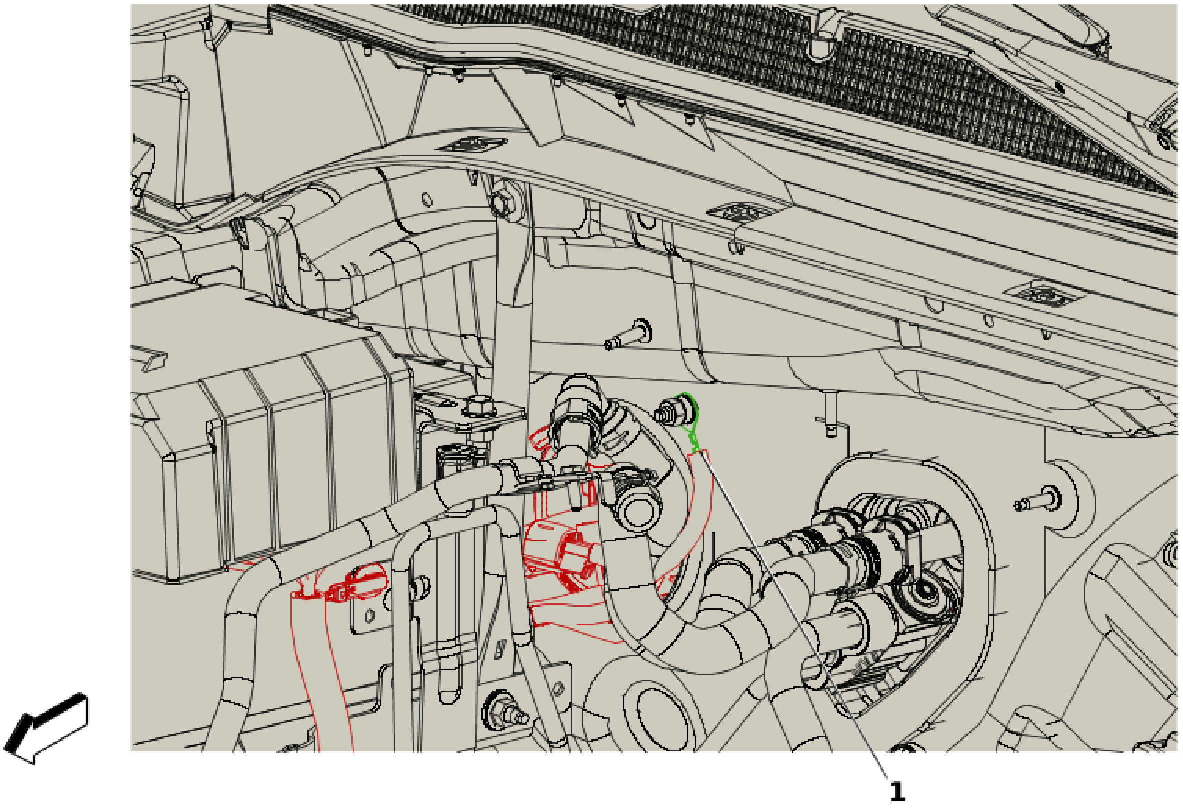


5286107

Items

(1)	G120 Body Harness

G131

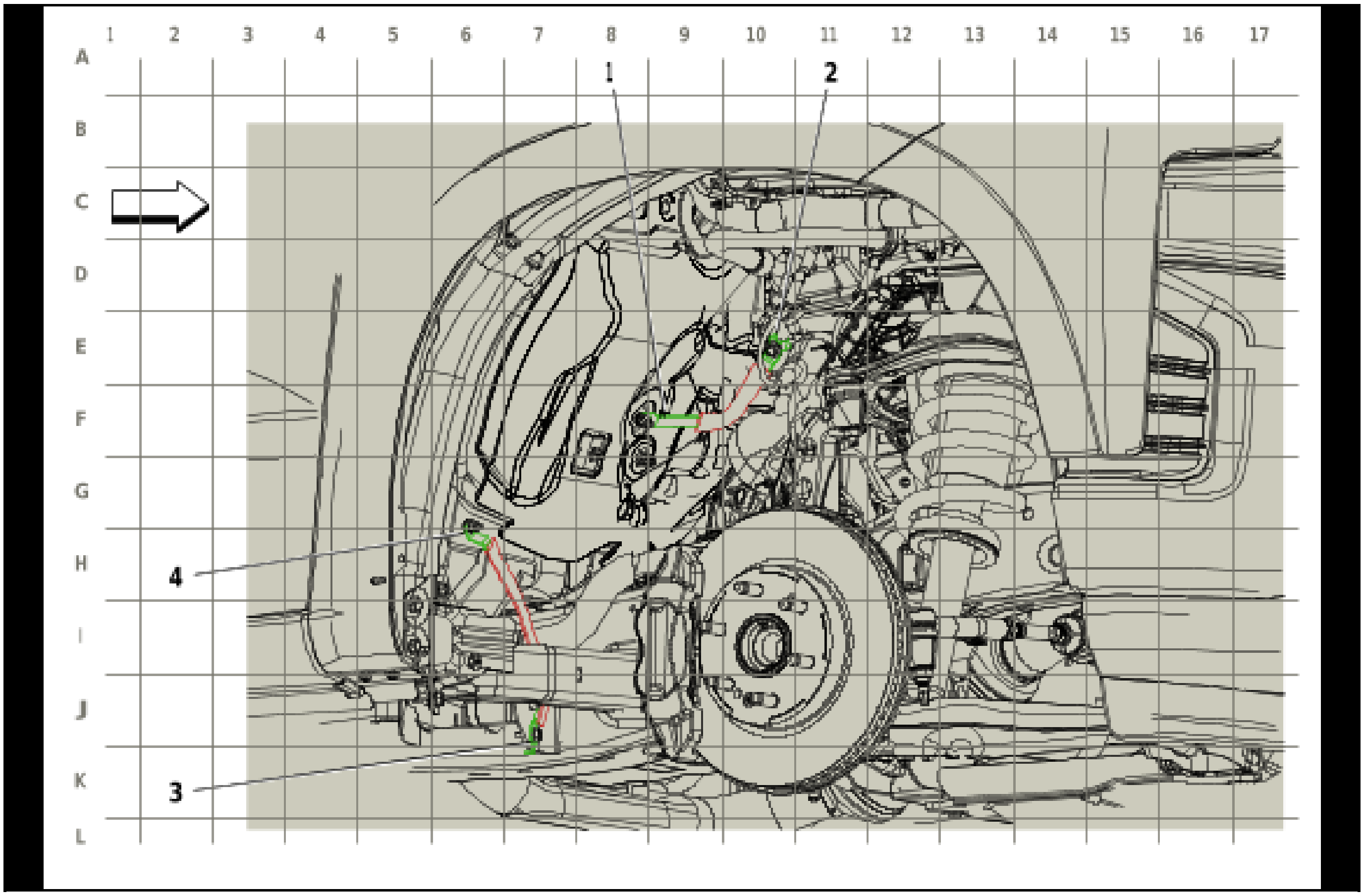


5286108

Items

(1)	G131 framee Ground Strap

G129, G131, G132, and G133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D
E
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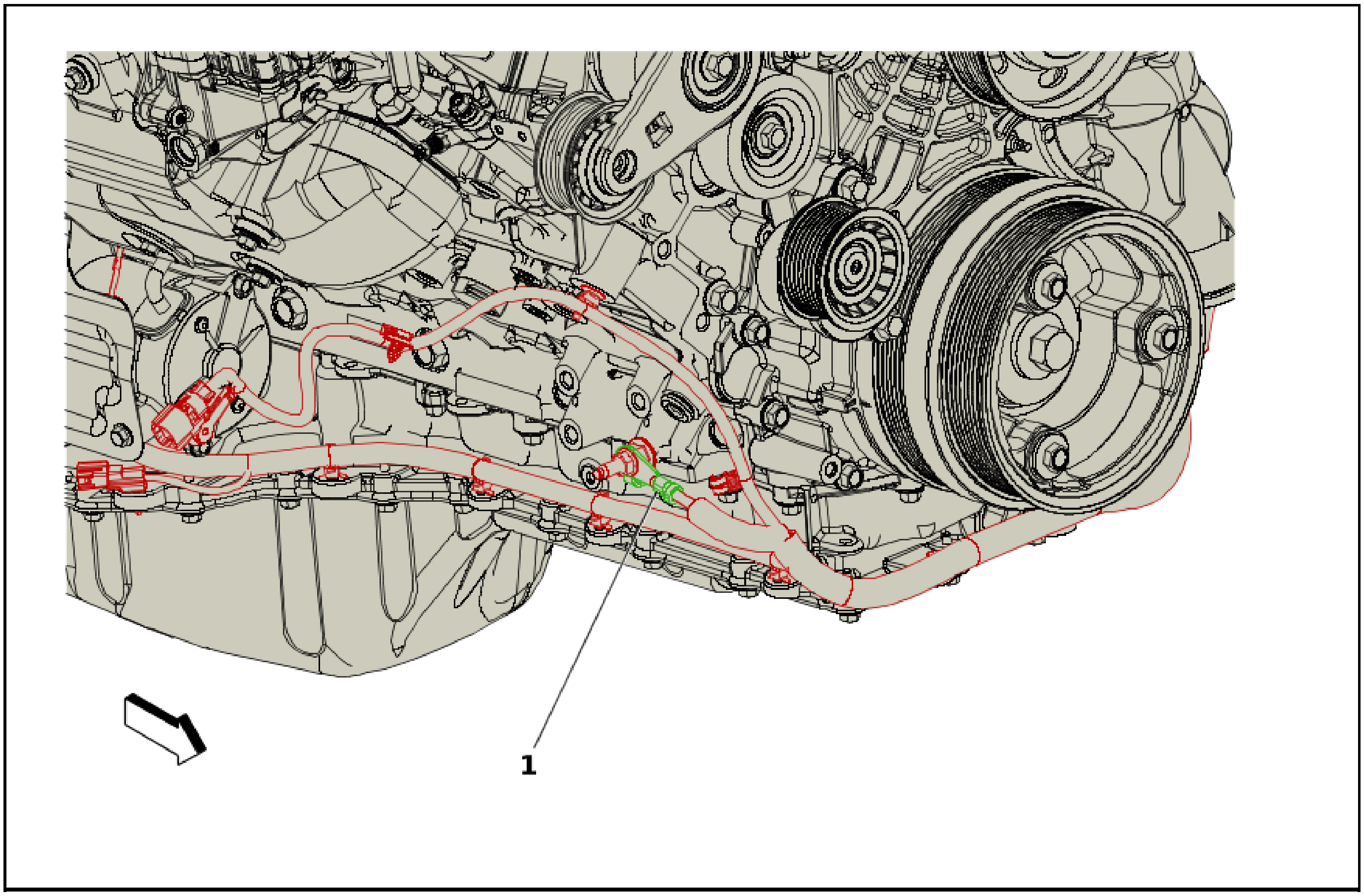
3

5754387

Items

(1)	G132 Engine Ground Strap
(2)	G129 Body Ground Strap
(3)	G131 framee Ground Strap
(4)	G133 framee Ground Strap

G140 (L5P)

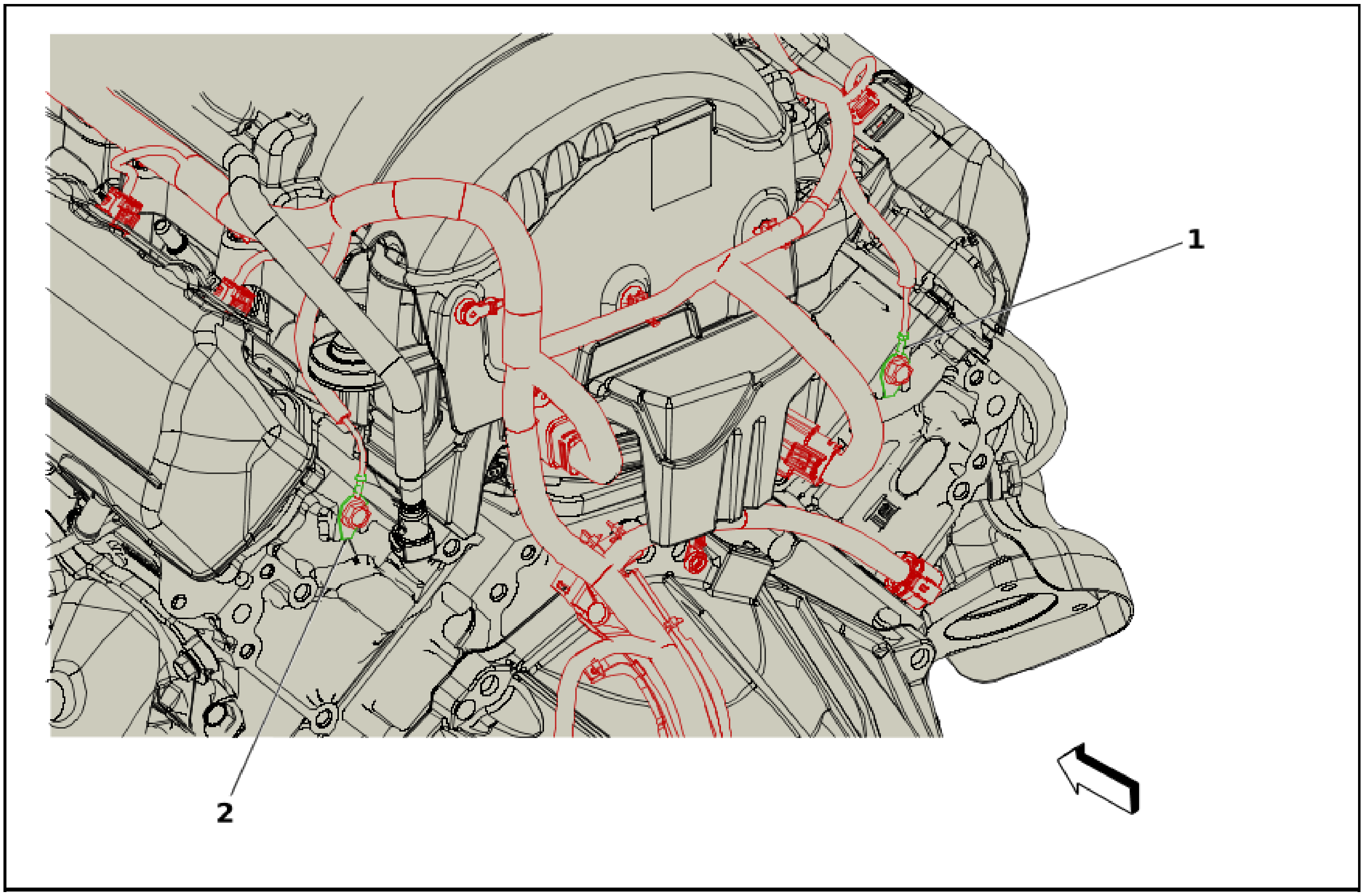


5218361

Items

(1)	G140 Engine Harness (L5P)

G141 and G142 (L8T)

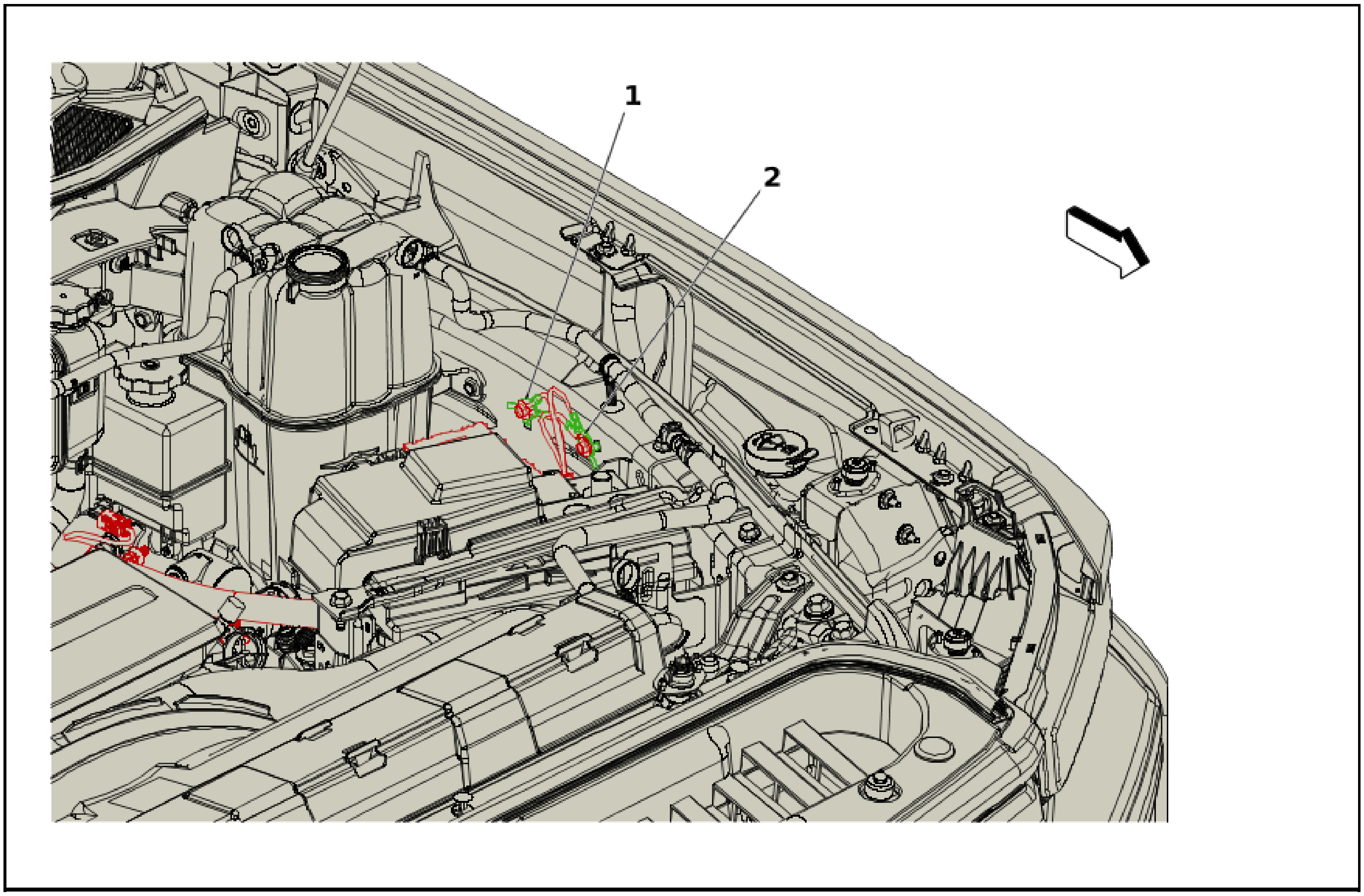


5218363

Items

(1)	G142 Engine Harness (L8T)
(2)	G141 Engine Harness (L8T)

G100, G110, G112 and G114

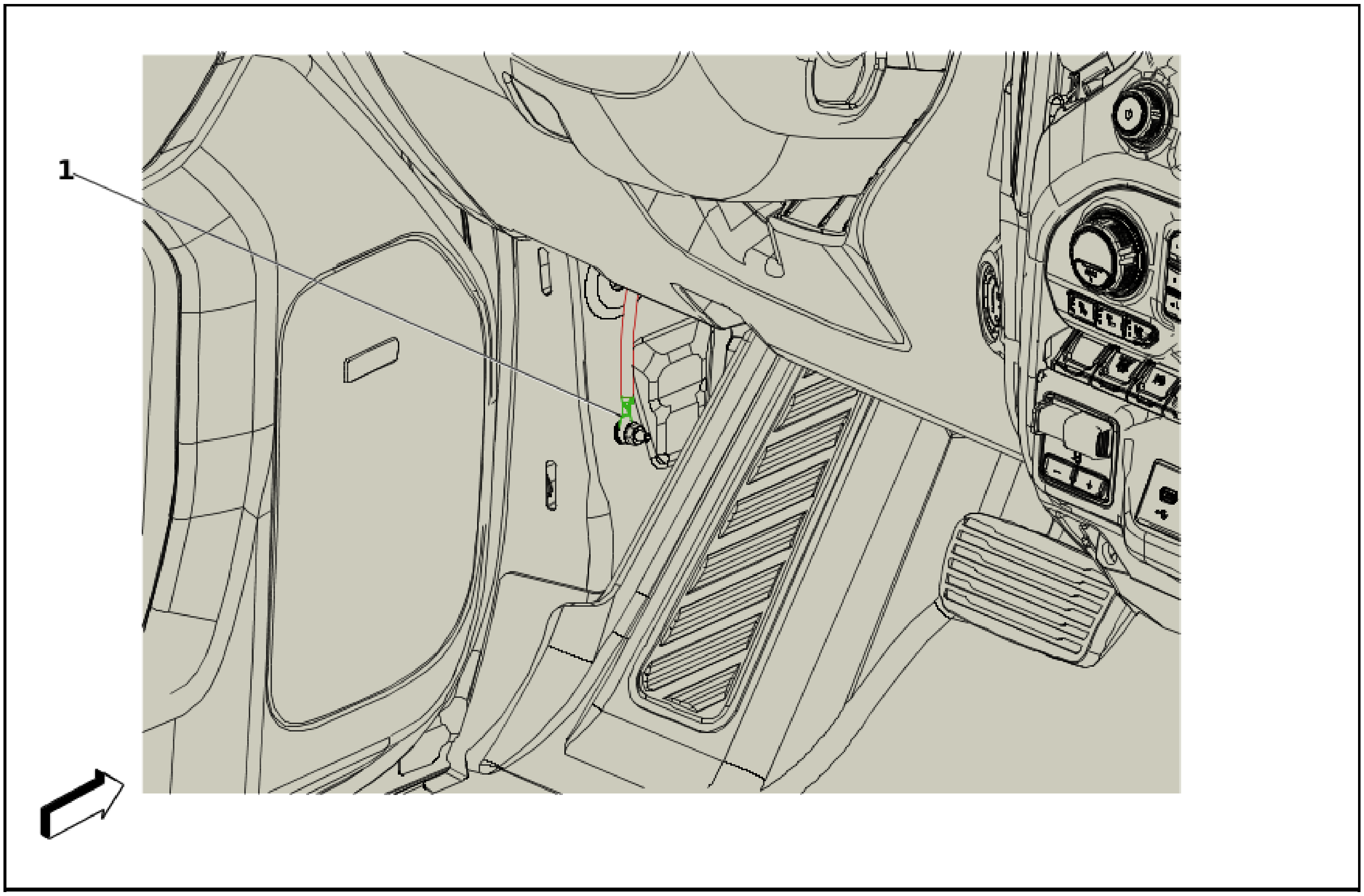


5286788

Items

(1)	G114 Engine Harness
(2)	G110 Body Harness

G200

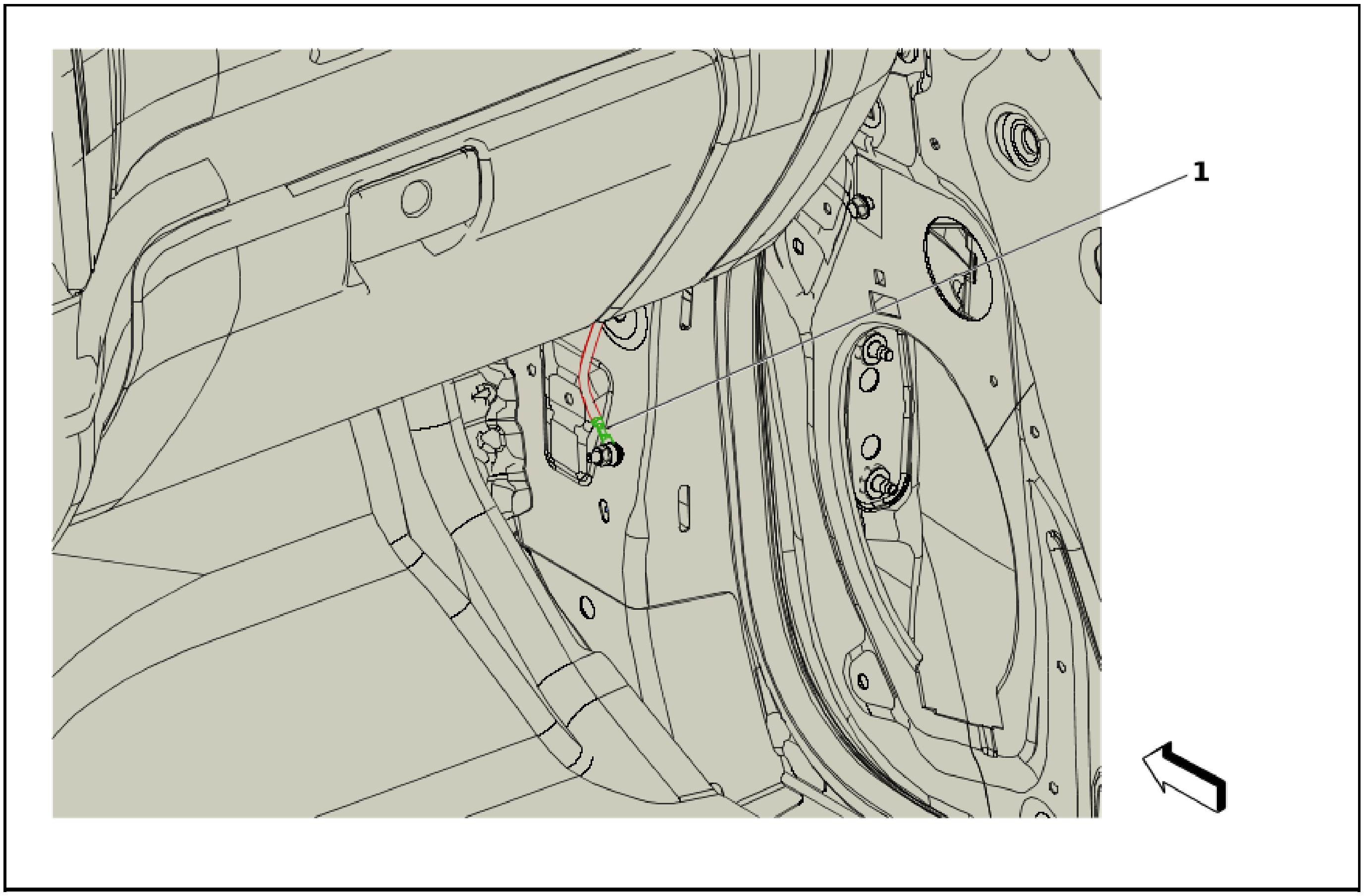


5254415

Items

(1)	G200 Instrument Panel Harness

G220

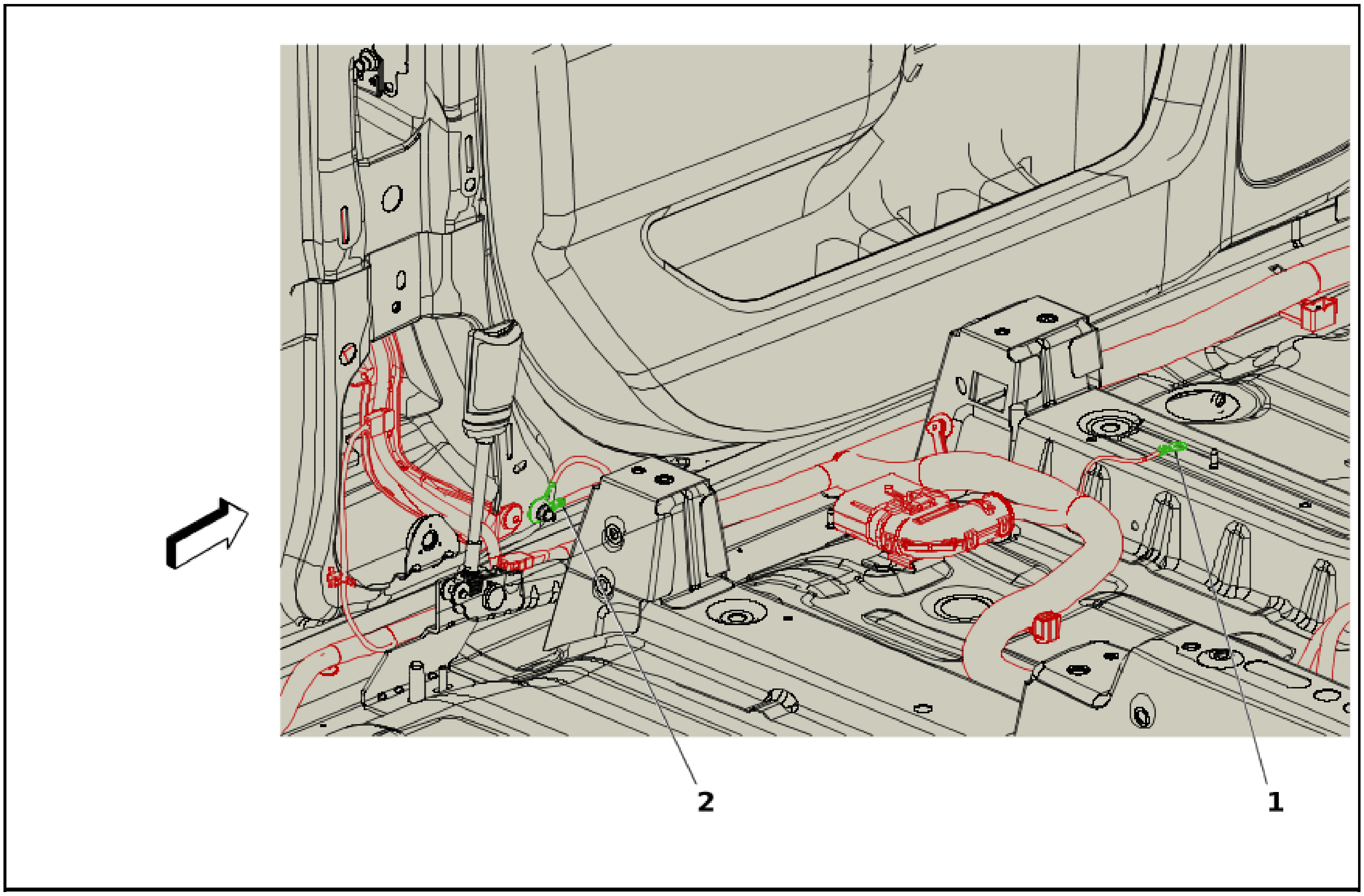


5254418

Items

(1)	G220 Instrument Panel Harness

G300, G302 and G308

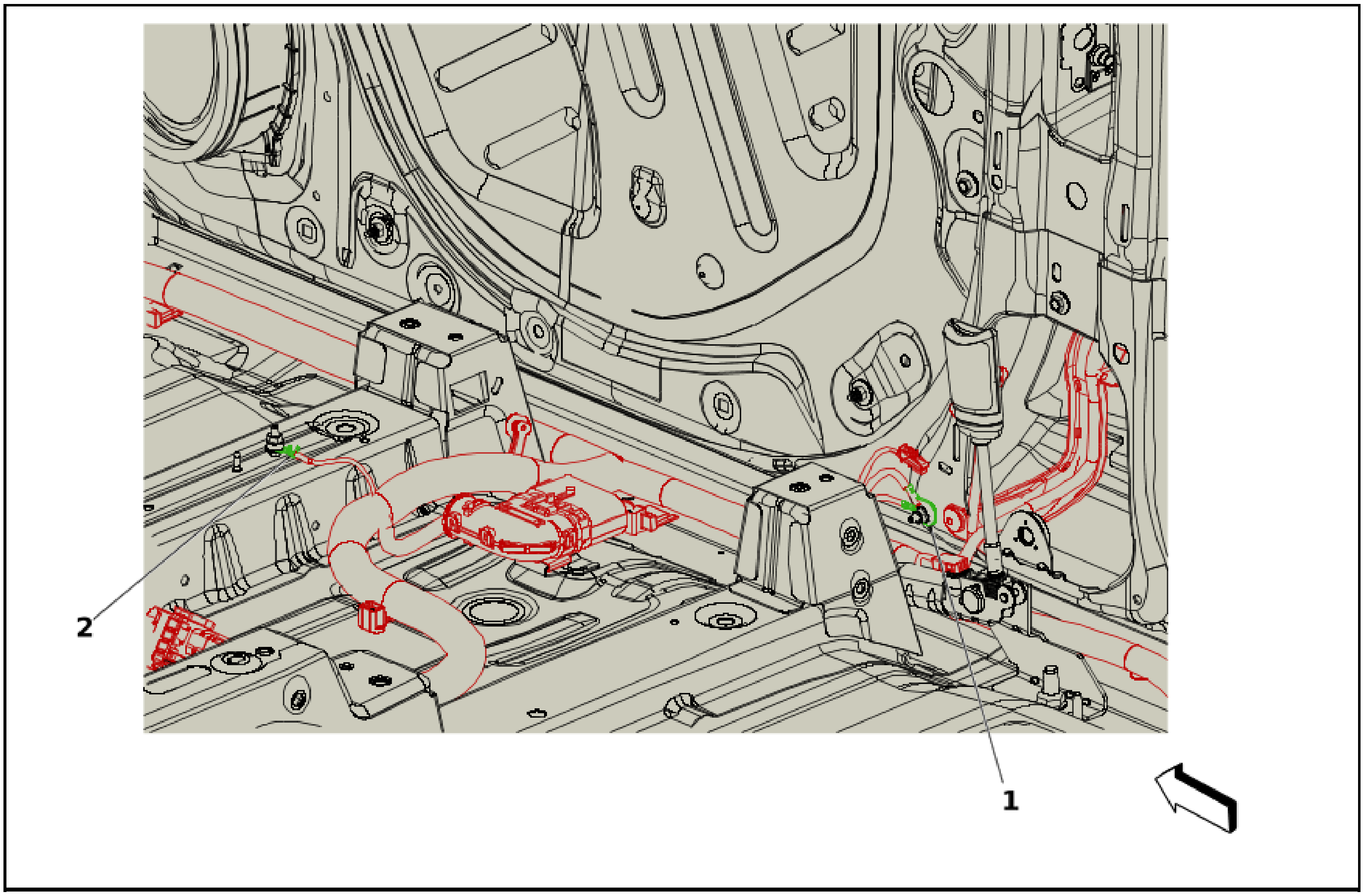


5279366

Items

(1)	G308 Body Harness
(2)	G300 Body Harness

G312, G318 and G320

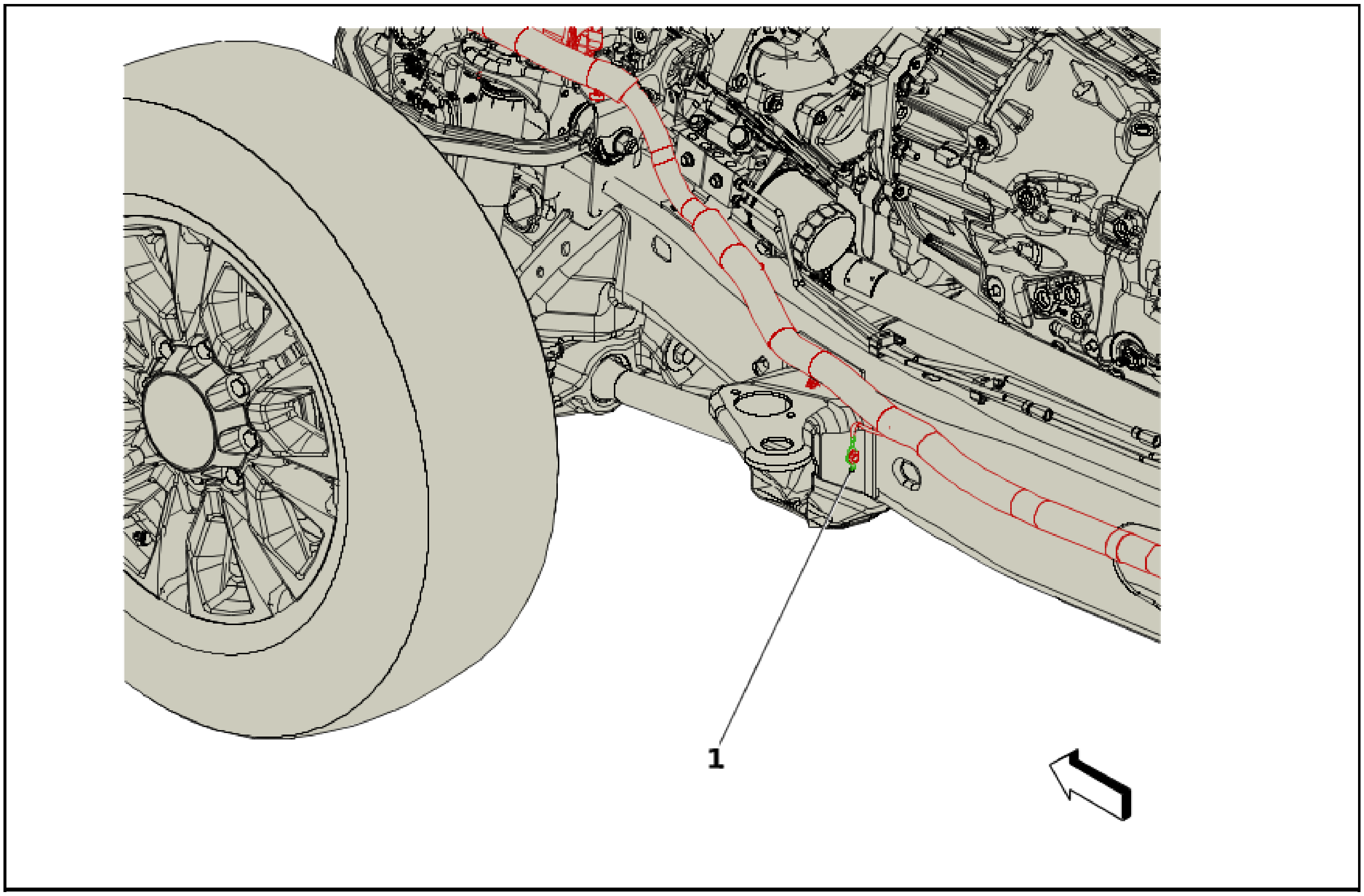


5279368

Items

(1)	G320 Body Harness
(2)	G312 Body Harness

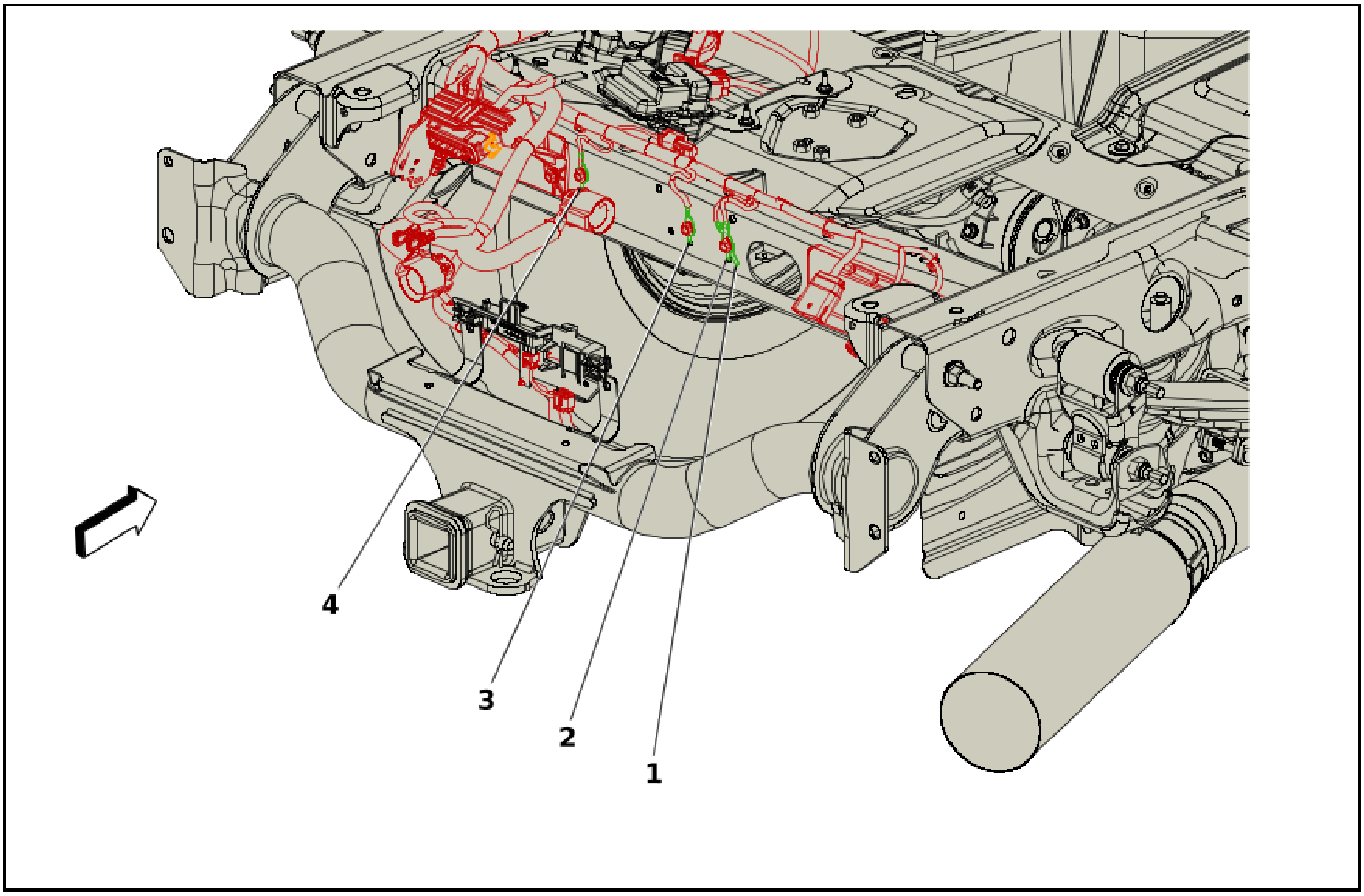
G322



5276861

Items	
(1)	G322 Chassis Harness

G400, G405, G415 and G416

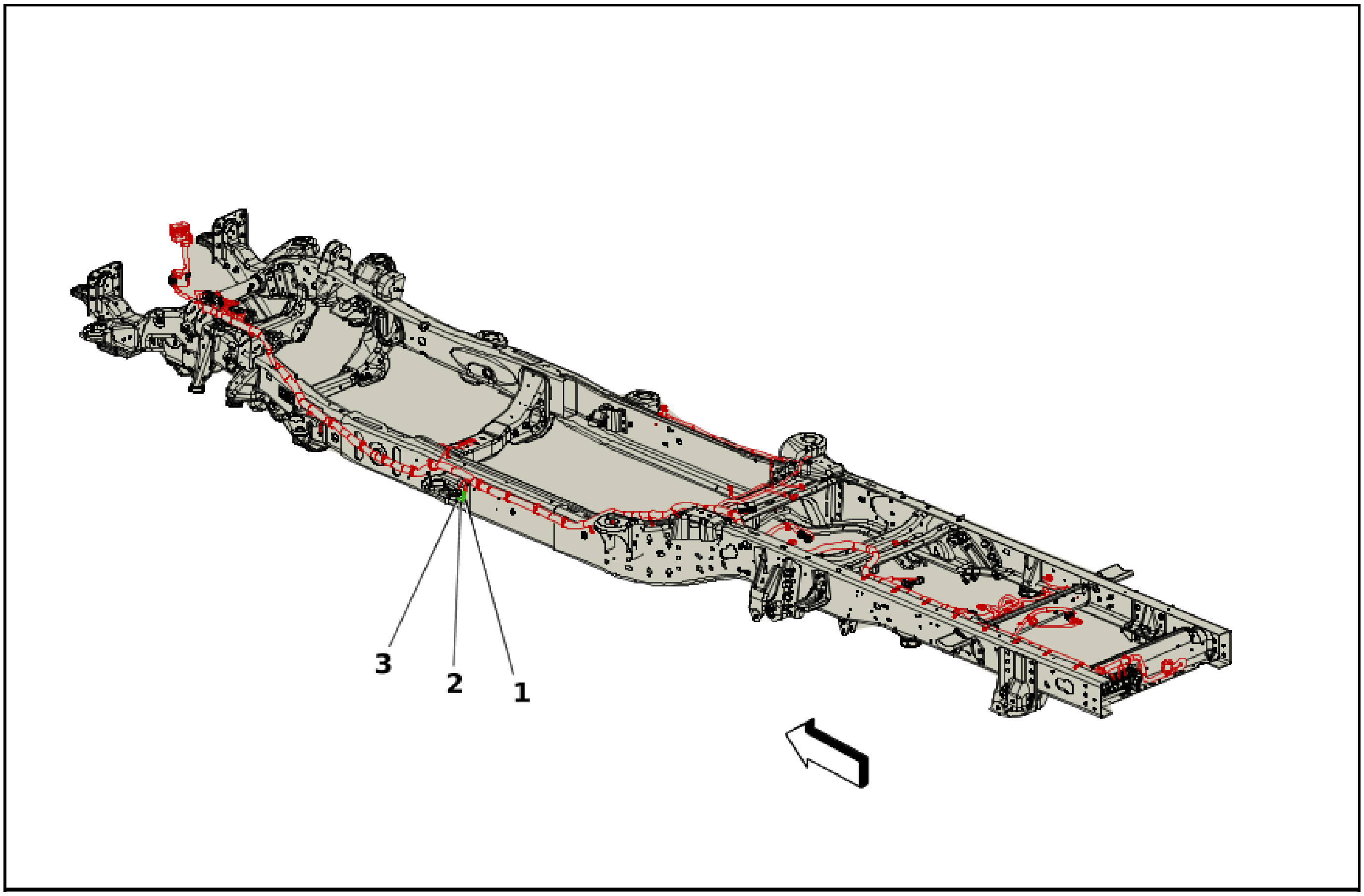


5276863

Items

(1)	G416 Chassis Harness
(2)	G415 Chassis Harness
(3)	G405 Chassis Harness
(4)	G400 Chassis Harness

G405, G415 and G416 (Chassis Cab)



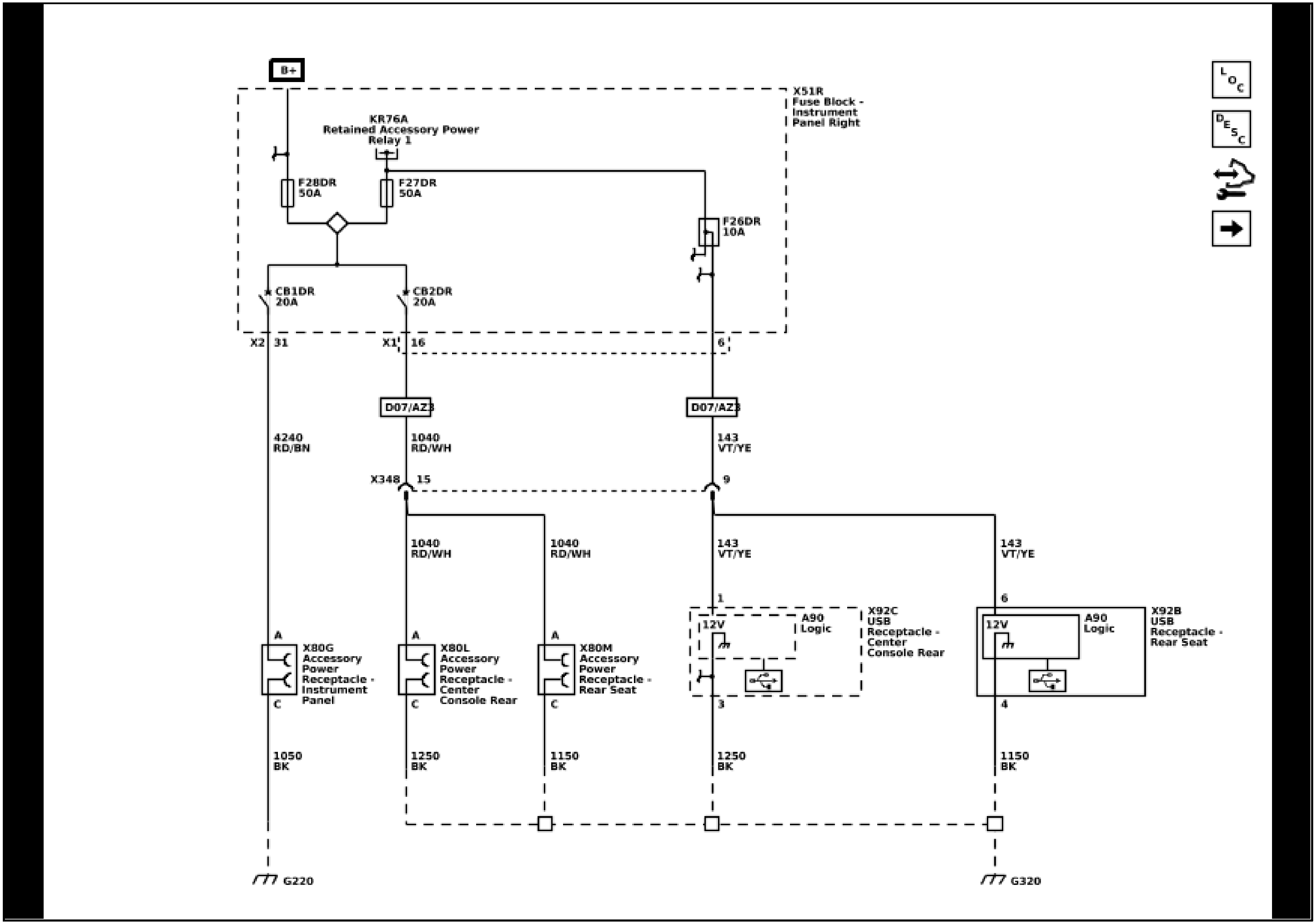
Items

(1)	G415 Chassis Harness
(2)	G416 Chassis Harness
(3)	G405 Chassis Harness

Power Outlets

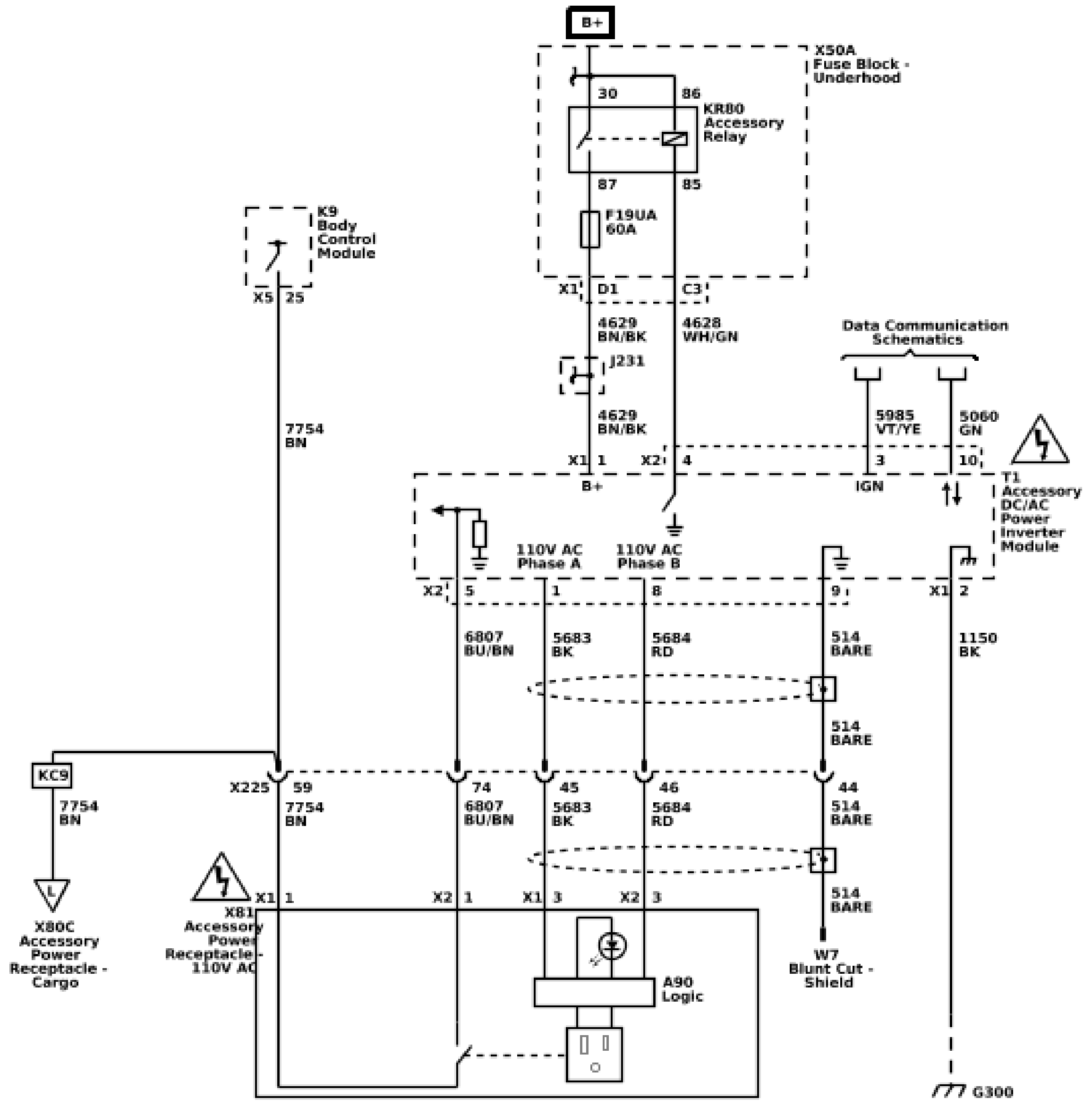
Schematic and Routing Diagrams

Cigar Lighter/Power Outlet Schematics (12V DC Power Outlets and USB Receptacles)


B+
X51R
Fuse Block -
Instrument
Panel Right
KR76A
Retained Accessory Power
Relay 1
F28DR
50A
F27DR
50A
F26DR
10A
CB1DR
20A
CB2DR
20A
X2 31
X1 16
6
D07/AZ3
D07/AZ3
4240
RD/BN
1040
RD/WH
143
VT/YE
X348 15
9
1040
RD/WH
1040
RD/WH
143
VT/YE
143
VT/YE
1
6
12V
A90
Logic
X92C
USB
Receptacle -
Center
Console Rear
12V
A90
Logic
X92B
USB
Receptacle -
Rear Seat
A
X80G
Accessory
Power
Receptacle -
Instrument
Panel
C
A
X80L
Accessory
Power
Receptacle -
Center
Console Rear
C
A
X80M
Accessory
Power
Receptacle -
Rear Seat
C
3
4
1050
BK
1250
BK
1150
BK
1250
BK
1150
BK
G220
G320

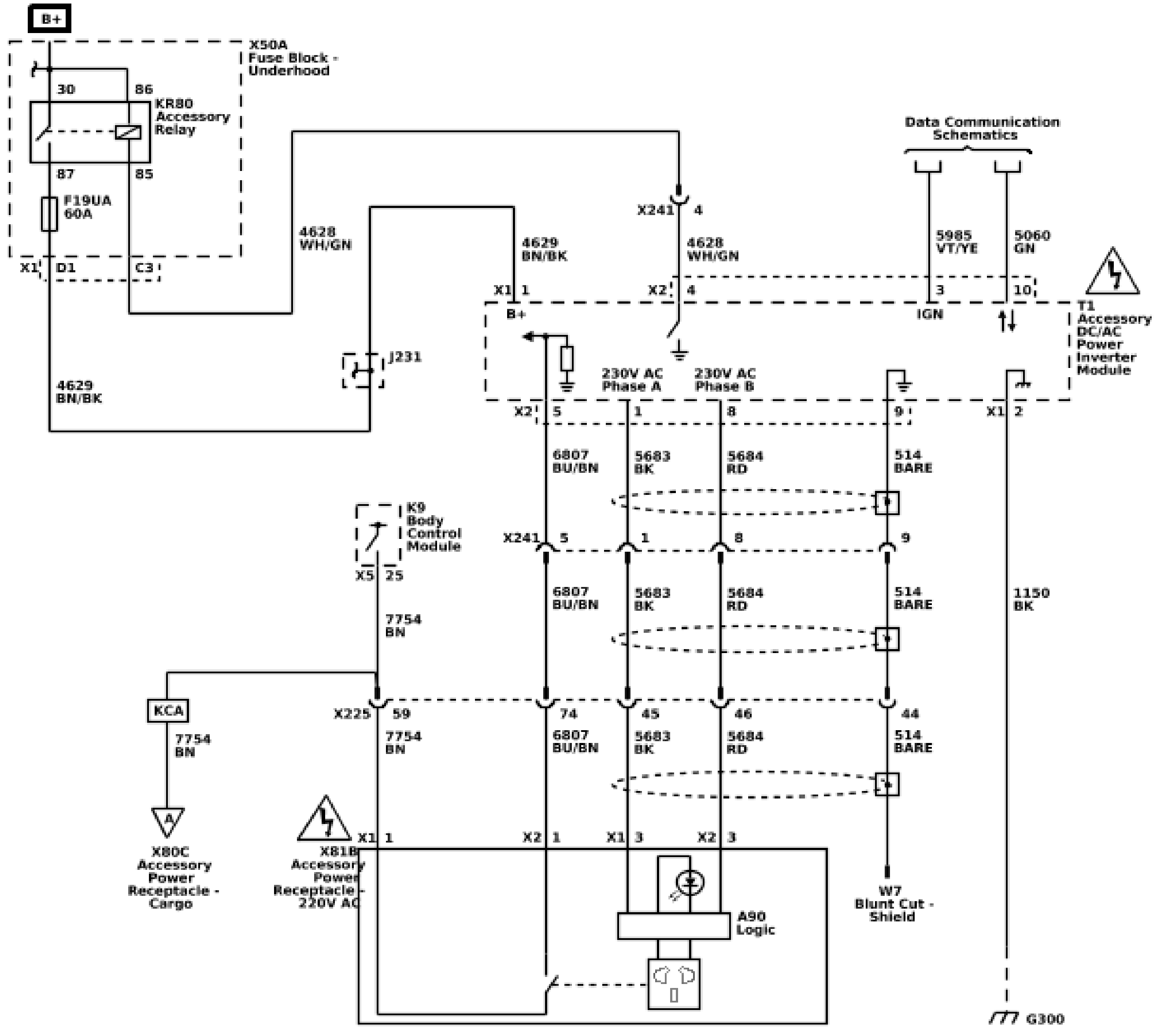
5995516

Cigar Lighter/Power Outlet Schematics (Inverter Module and Instrument Panel Power Receptacle - 110V AC (KI4))


B+
X50A
Fuse Block - Underhood
30
86
KR80
Accessory Relay
87
85
F19UA
60A
X1
D1
C3
4629
BN/BK
4628
WH/GN
J231
4629
BN/BK
K9
Body Control Module
X5
25
7754
BN
Data Communication Schematics
5985
VT/YE
5060
GN
X1
1
X2
4
3
10
B+
IGN
T1
Accessory DC/AC Power Inverter Module
110V AC
Phase A
110V AC
Phase B
X2
5
1
8
9
X1
2
6807
BU/BN
5683
BK
5684
RD
514
BARE
1150
BK
514
BARE
KC9
X225
59
74
45
46
44
7754
BN
7754
BN
6807
BU/BN
5683
BK
5684
RD
514
BARE
X80C
Accessory Power Receptacle - Cargo
X81
Accessory Power Receptacle - 110V AC
X1
1
X2
1
X1
3
X2
3
514
BARE
W7
Blunt Cut - Shield
A90
Logic
G300

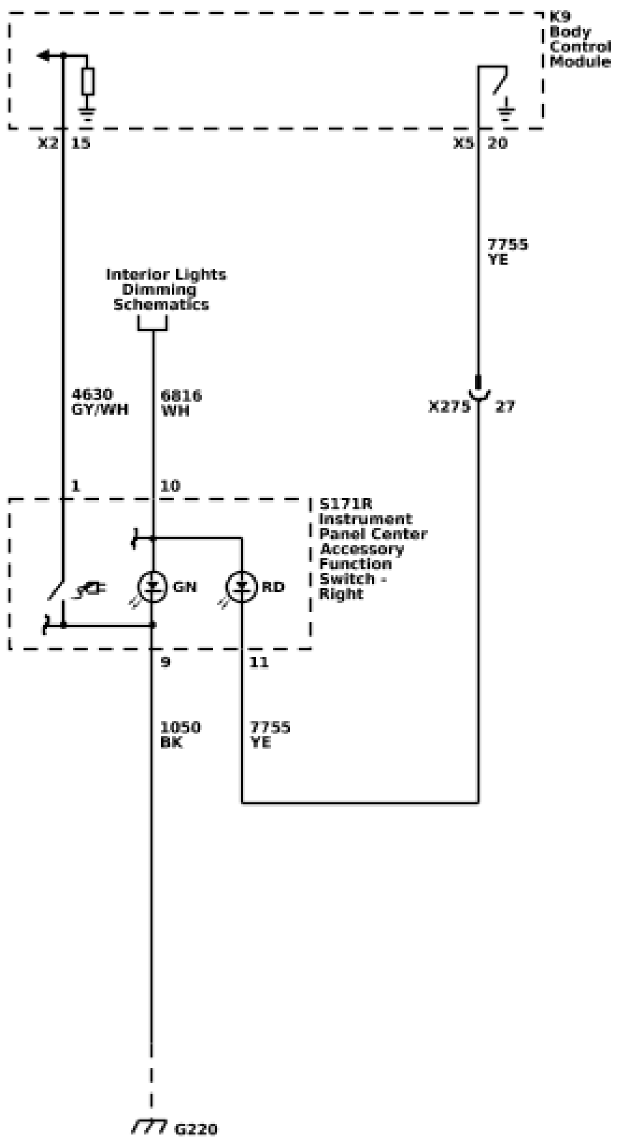
5995517

Cigar Lighter/Power Outlet Schematics (Inverter Module and Instrument Panel Power Receptacle - 230V AC (KI5))


B+
X50A Fuse Block - Underhood
30
86
KR80 Accessory Relay
87
85
F19UA 60A
X1
D1
C3
4628 WH/GN
4629 BN/BK
J231
X241
4
X1 1
B+
X2 4
4628 WH/GN
4629 BN/BK
Data Communication Schematics
5985 VT/YE
5060 GN
3
10
IGN
T1 Accessory DC/AC Power Inverter Module
230V AC Phase A
230V AC Phase B
X2 5
1
8
9
X1 2
6807 BU/BN
5683 BK
5684 RD
514 BARE
K9 Body Control Module
X5 25
X241 5
1
8
9
7754 BN
1150 BK
X225 59
74
45
46
44
KCA
7754 BN
X80C Accessory Power Receptacle - Cargo
X81B Accessory Power Receptacle - 220V AC
X1 1
X2 1
X1 3
X2 3
A90 Logic
W7 Blunt Cut - Shield
G300

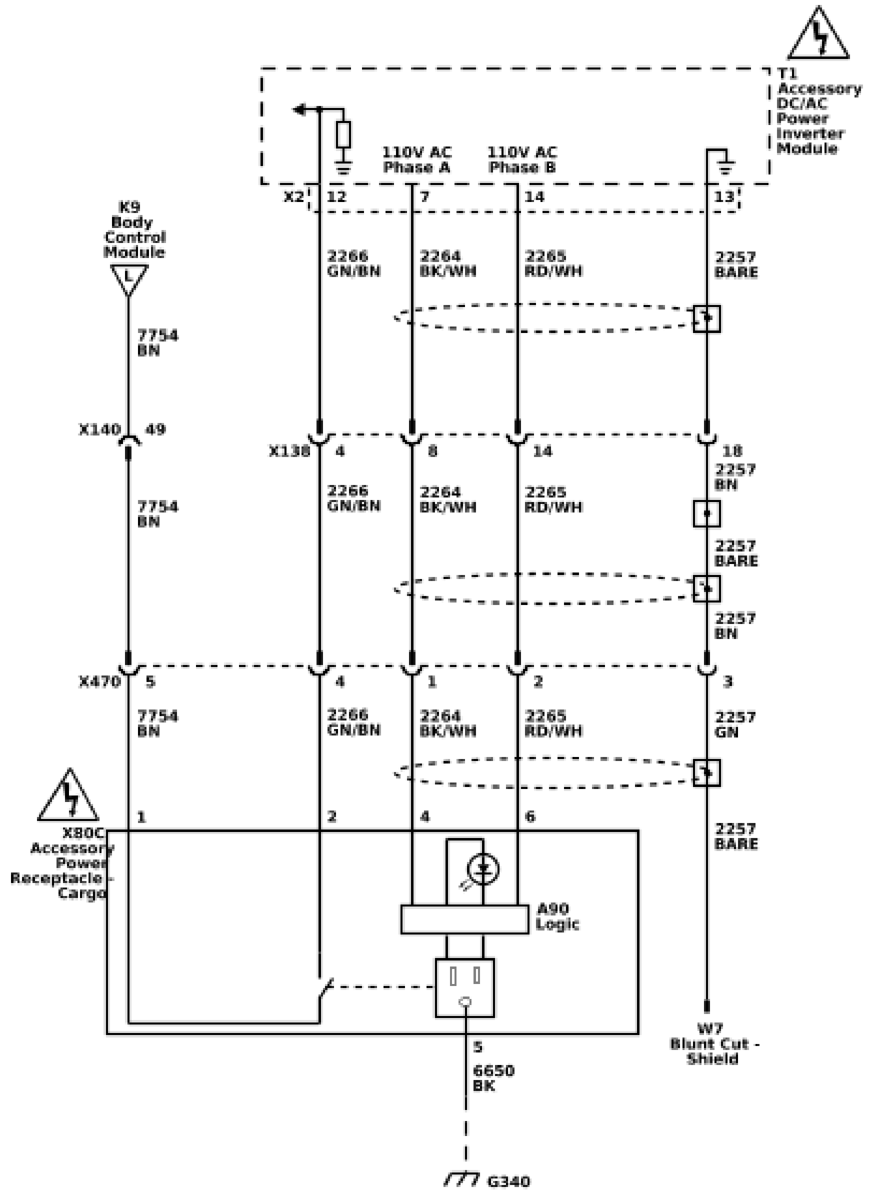
5995518

Cigar Lighter/Power Outlet Schematics (Cargo Power Receptacle Controls and Indicators (KC9/KCA))


K9
Body
Control
Module
X2 15
X5 20
7755
YE
Interior Lights
Dimming
Schematics
4630
GY/WH
6816
WH
X275 27
1
10
S171R
Instrument
Panel Center
Accessory
Function
Switch -
Right
GN
RD
9
11
1050
BK
7755
YE
G220

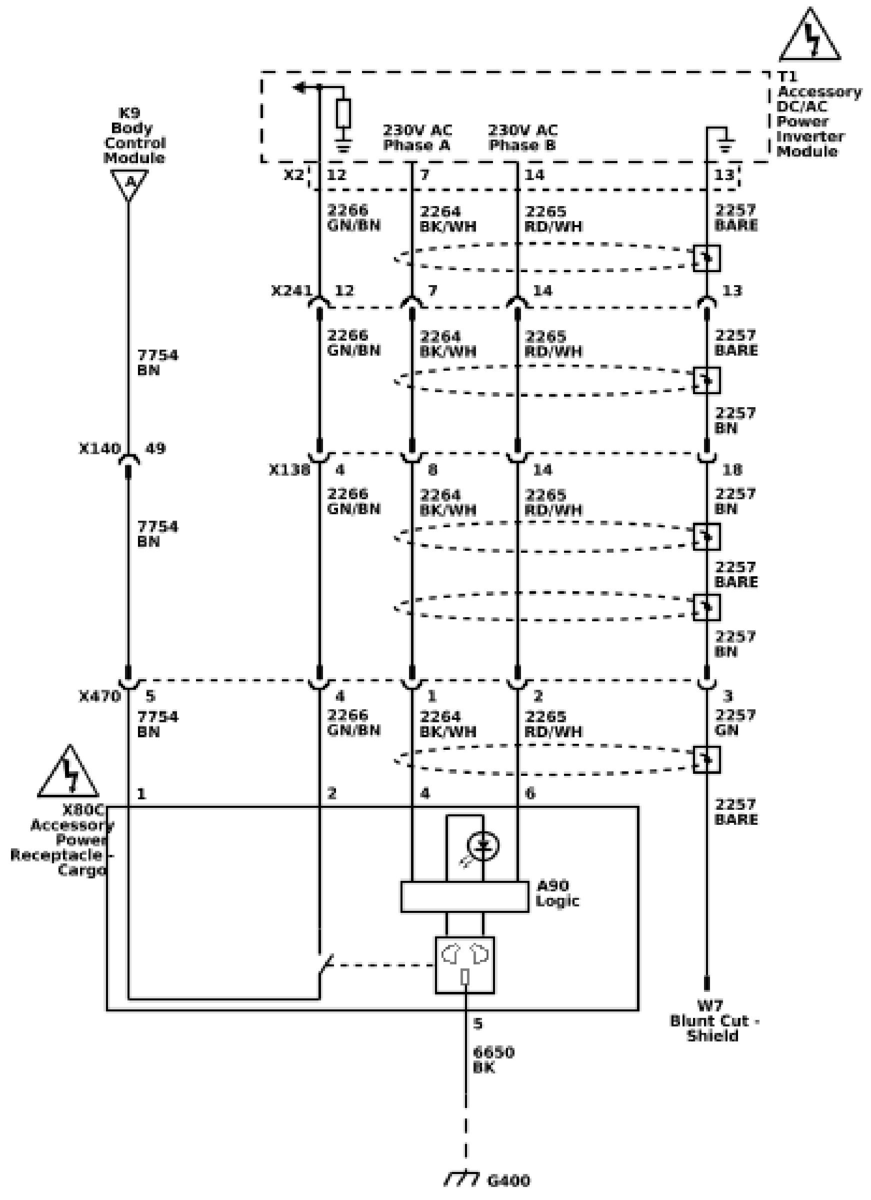
5995519

Cigar Lighter/Power Outlet Schematics (Cargo Power Receptacle - 110V AC (KC9))


T1
Accessory
DC/AC
Power
Inverter
Module
110V AC
Phase A
110V AC
Phase B
X2
12
7
14
13
K9
Body
Control
Module
L
2266
GN/BN
2264
BK/WH
2265
RD/WH
2257
BARE
7754
BN
X140
49
X138
4
8
14
18
2257
BN
X470
5
4
1
2
3
2257
GN
X80C
Accessory
Power
Receptacle -
Cargo
1
2
4
6
A90
Logic
5
6650
BK
G340
W7
Blunt Cut -
Shield

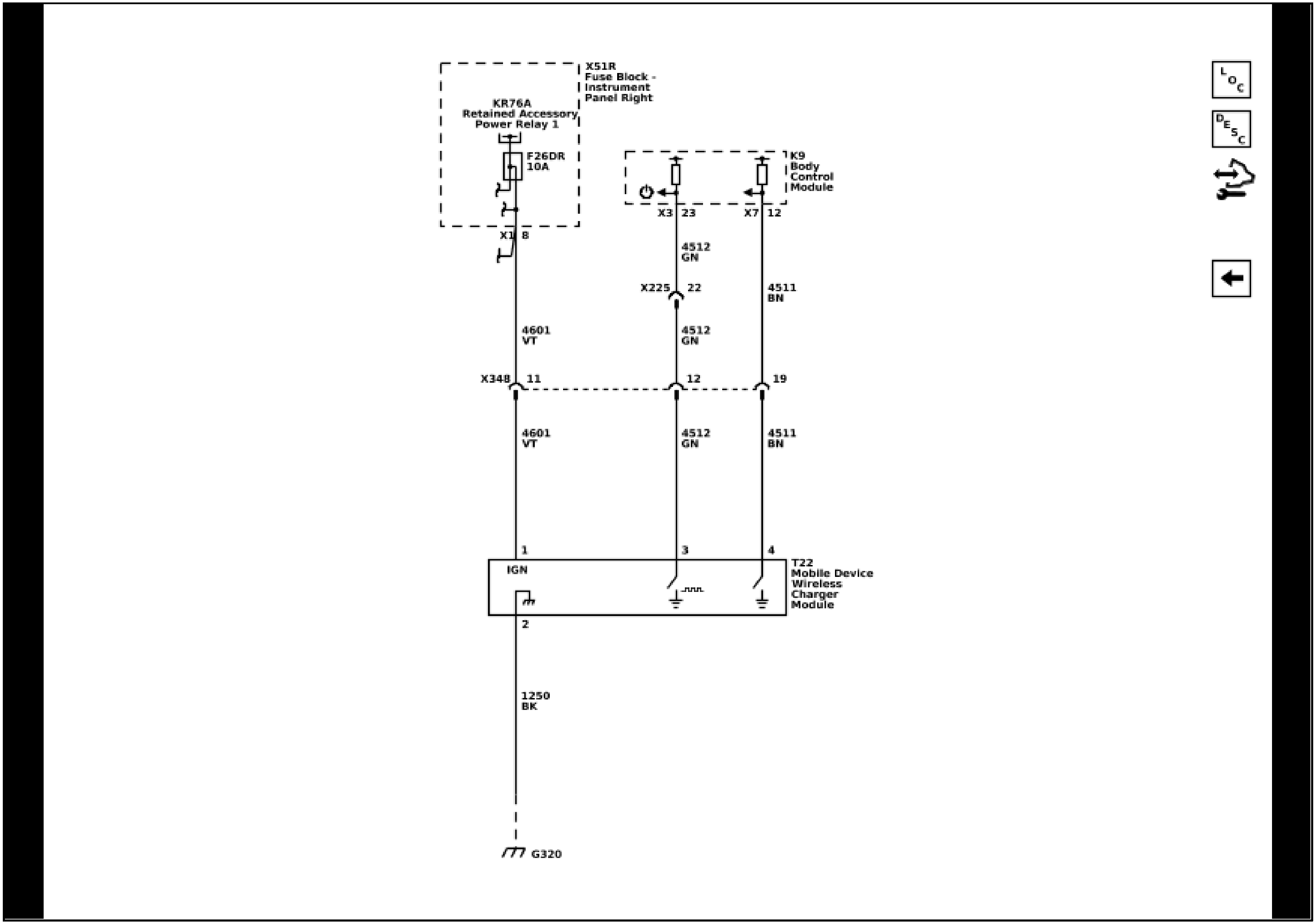
5995520

Cigar Lighter/Power Outlet Schematics (Cargo Power Receptacle - 230V AC (KCA))


T1
Accessory DC/AC Power Inverter Module
K9
Body Control Module
A
230V AC Phase A
230V AC Phase B
X2
12
7
14
13
2266 GN/BN
2264 BK/WH
2265 RD/WH
2257 BARE
X241
12
7
14
13
2266 GN/BN
2264 BK/WH
2265 RD/WH
2257 BARE
2257 BN
7754 BN
X140
49
X138
4
8
14
18
2266 GN/BN
2264 BK/WH
2265 RD/WH
2257 BN
7754 BN
2257 BARE
2257 BN
X470
5
4
1
2
3
7754 BN
2266 GN/BN
2264 BK/WH
2265 RD/WH
2257 GN
1
2
4
6
2257 BARE
X80C
Accessory Power Receptacle - Cargo
A90
Logic
5
6650 BK
G400
W7
Blunt Cut - Shield

5995521

Cigar Lighter/Power Outlet Schematics (Wireless Charging (K4C))


X51R
Fuse Block - Instrument Panel Right
KR76A
Retained Accessory Power Relay 1
F26DR
10A
X1 8
4601
VT
X348 11
4601
VT
K9
Body Control Module
X3 23
4512
GN
X225 22
4512
GN
12
4512
GN
X7 12
4511
BN
19
4511
BN
1
IGN
3
4
T22
Mobile Device Wireless Charger Module
2
1250
BK
G320

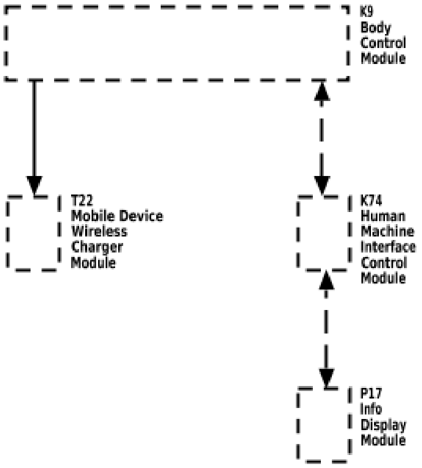
5995522

Description and Operation

Mobile Device Wireless Charger Description and Operation

Mobile Device Wireless Charging System

Mobile Device Wireless Charging System Block Diagram



3607745

The Mobile Device Wireless Charging System (WCS) is an system for wirelessly charging mobile devices. It is capable of charging the batteries of compatible mobile devices. A compatible device is one that is compliant with Power Matters Alliance (PMA) or Wireless Power Consortium (WPC) Standard, meaning that it is equipped with a PMA or WPC wireless charge “receiver” that will work with the charge “transmitter” installed in the vehicle. The devices may utilize built-in charging circuitry or an adapter (external plug-in device which contains the charging circuitry). To check for phone or other device compatibility, refer to GM Total Connect.

Warning: Remove all objects from the charging pad before charging your mobile device. Objects, such as coins, keys, rings, paper clips, or cards, between the phone and charging pad will become very hot. On the rare occasion that the charging system does not detect an object, and the object gets wedged between the phone and charger, remove the phone and allow the object to cool before removing it from the charging pad, to prevent burns.

Charging

To charge a device, place it on the charging surface in the vehicle. There is a charging coil located in the center of the charging surface. The device has a charging coil typically near the center of the device. These coils must be lined up in order for charging to proceed. When the interruptible retained accessory power (IRAP) relay is closed (this is true typically when vehicle ignition is in Run or Accessory position), the WCS will detect the device, establish communications with the device to confirm it is a compatible device, and then deliver charging power to the device via wireless interface. The WCS will be able to deliver up to 5W of power to compatible devices. It shall only enter a charging state if communication is established and a compatible device is identified.

The WCS shall not enter a charging state if there is no communication established with a compatible device. If a non-compatible device or metallic foreign object is detected, the WCS will not transfer power. The charger monitors its internal temperature and will shut down if the charger temperature exceeds 185F (85C).

Indicator

The body control module will detect the device battery is charging and send a serial data message on the GMLAN bus to the radio display. The radio display will indicate a device is currently charging. When the indicator is toggling on and off this indicates a thermal limit has been reached and the device will not charge. For more information refer to the owners manual.

Cooling

The wireless charger is kept cool using the HVAC system. There is a dedicated HVAC duct that connects to the Wireless Charging Module bracket (which holds the module and the mat).

Power Outlets Description and Operation

12 Volt Power Outlet Receptacle Description and Operation

The vehicle is fitted with a 12 V accessory power receptacle. The accessory power receptacles are controlled by an ignition operated relay. The accessory power receptacles are operational when the ignition is turned to either the On or the Accessories positions. The X80 accessory power receptacles may be configured to be operational when the ignition is Off by changing the position of the 50A fuse from the F27DR position to the F28DR position in the instrument panel fuse block.

110 Volt Power Outlet Receptacle System Description

The alternating current (AC) accessory power outlet system consists of the accessory DC/AC power inverter module and the accessory power receptacle – 110 V AC. The accessory DC/AC power inverter module converts 12 V direct current (DC) battery power to 110 V at 60 Hertz (Hz) AC power to operate AC powered devices. The accessory DC/AC power inverter module provides up to 400 watts of power. The accessory power receptacle – 110 V AC provides the usual connection for AC powered devices.

110 Volt Power Outlet Receptacle System Operation

The accessory DC/AC power inverter module receives fuse protected battery voltage and is connected to the 12 V electrical system ground. The accessory power receptacle – 110 V AC has an internal switch, that detects when an AC powered device is plugged into the outlet, and an Accessory Power Switch located on the S171R Instrument Panel Center Accessory Function Switch — Right. When the ignition is ON, the Accessory Power Switch is ON, and an AC powered device is plugged into the accessory power receptacle – 110 V AC, the normally open switch in the accessory power receptacle – 110 V AC, closes. When the accessory DC/AC power inverter module detects the voltage from the accessory power receptacle – 110 V AC switch, the inverter module begins to supply 110 V AC to the accessory power receptacle – 110 V AC after a 1.5 s delay. The accessory AC power system is protected against circuit overload and circuit shorts to ground.

110 Volt Power Outlet Receptacle Isolation Fault Protection

The accessory DC/AC power inverter module contains a ground fault circuit interrupter (GFCI). GFCI monitors the 110 V circuit for a short to vehicle chassis ground. If a 110 V AC short to ground is detected, the accessory DC/AC power inverter module will turn OFF. The module remains OFF, until the AC powered device is unplugged from the outlet, and then plugged into the outlet after a 3 s delay.

110 Volt Power Outlet Receptacle Overload Shutdown

The accessory DC/AC power inverter module will turn OFF if the current in the 110 V circuit is greater than 3.8 A for 1 s , or 2.5 A for 10 s . The module will turn ON again, when the AC powered device is unplugged from the outlet, and then plugged into the outlet after a 3 s delay.

110 Volt Power Outlet Receptacle Internal Shutdown

The accessory DC/AC power inverter module will turn OFF if the B+ supply voltage is greater than 16.5 V or less than 11 V. The module will also turn OFF if the device temperature is greater than 85°C (185°F). The module will turn ON again, after the shutdown condition is corrected, and the AC powered device is unplugged from the outlet, and then plugged into the outlet.

220 Volt Power Outlet Receptacle System Description

The alternating current (AC) accessory power outlet system consists of the accessory DC/AC power inverter module and the accessory power receptacle – 220V AC. The accessory DC/AC power inverter module converts 12 V direct current (DC) battery power to 220–230 V at 50 Hertz (Hz) AC power to operate AC powered devices. The accessory DC/AC power inverter module provides up to 400 watts of power. The accessory power receptacle – 220V AC provides the usual connection for AC powered devices.

220 Volt Power Outlet Receptacle System Operation

The accessory DC/AC power inverter module receives fuse protected battery voltage and is connected to the 12 V electrical system ground. The accessory power receptacle – 220 V AC has an internal switch, that detects when an AC powered device is plugged into the outlet, and an Accessory Power Switch located on the S171R Instrument Panel Center Accessory Function Switch — Right. When the ignition is ON, the Accessory Power Switch is ON, and an AC powered device is plugged into the accessory power receptacle – 220 V AC, the normally open switch in the accessory power receptacle – 220 V AC, closes. When the accessory DC/AC power inverter module detects the voltage from the accessory power receptacle – 220 V AC switch, the inverter module begins to supply 220 V

AC to the accessory power receptacle – 220 V AC after a 1.5 s delay. The accessory AC power system is protected against circuit overload and circuit shorts to ground.

220 Volt Power Outlet Receptacle Isolation Fault Protection

The accessory DC/AC power inverter module contains a ground fault circuit interrupter (GFCI). GFCI monitors the 220 V circuit for a short to vehicle chassis ground. If a 220 V AC short to ground is detected, the accessory DC/AC power inverter module will turn OFF. The module remains OFF, until the AC powered device is unplugged from the outlet, and then plugged into the outlet after a 3 s delay.

220 Volt Power Outlet Receptacle Overload Shutdown

The accessory AC/DC power control module will turn OFF if the current in the 220 V circuit is greater than 3.8 A for 1 second, or 2.5 A for 10 seconds. The module will turn ON again, when the AC powered device is unplugged from the outlet, and then plugged into the outlet after a 3 second delay.

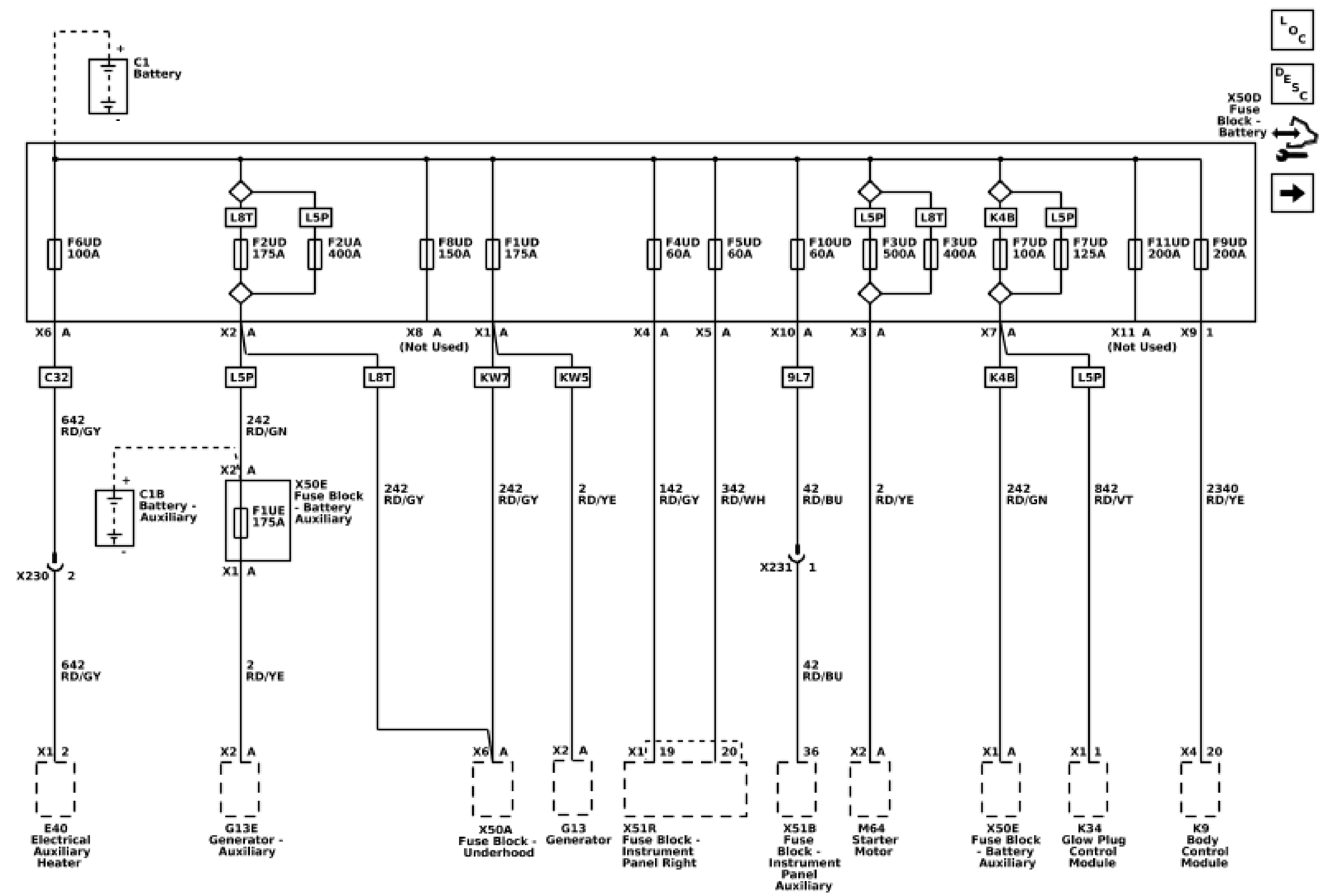
220 Volt Power Outlet Receptacle Internal Shutdown

The accessory DC/AC power inverter module will turn OFF if the B+ supply voltage is greater than 16.5 V or less than 11 V. The module will also turn OFF if the device temperature is greater than 85°C (185°F). The module will turn ON again, after the shutdown condition is corrected, and the AC powered device is unplugged from the accessory power receptacle – 220V AC, and then plugged into the accessory power receptacle – 220V AC.

Wiring Systems and Power Management

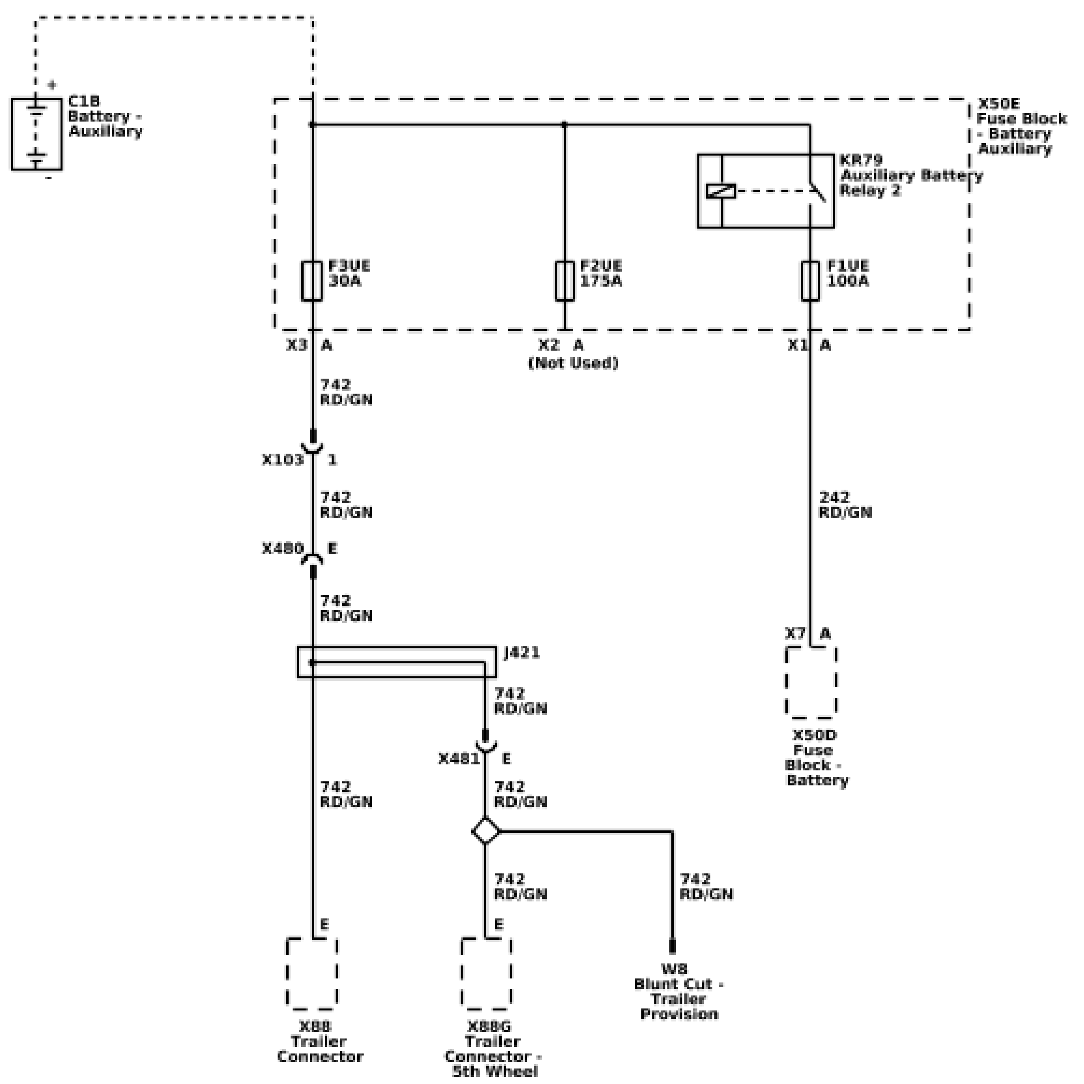
Schematic and Routing Diagrams

Power Distribution Schematics (X50D Battery Fuse Block)


C1
Battery
X50D
Fuse
Block -
Battery
F6UD
100A
L8T
L5P
F2UD
175A
F2UA
400A
F8UD
150A
F1UD
175A
F4UD
60A
F5UD
60A
F10UD
60A
L5P
L8T
F3UD
500A
F3UD
400A
K4B
L5P
F7UD
100A
F7UD
125A
F11UD
200A
F9UD
200A
X6 A
X2 A
X8 A
(Not Used)
X1 A
X4 A
X5 A
X10 A
X3 A
X7 A
X11 A
(Not Used)
X9 1
C32
L5P
L8T
KW7
KW5
9L7
K4B
L5P
642
RD/GY
242
RD/GN
C1B
Battery -
Auxiliary
X2 A
X50E
Fuse Block
- Battery
Auxiliary
F1UE
175A
X1 A
242
RD/GY
242
RD/GY
2
RD/YE
142
RD/GY
342
RD/WH
42
RD/BU
2
RD/YE
242
RD/GN
842
RD/VT
2340
RD/YE
X230 2
X231 1
642
RD/GY
2
RD/YE
42
RD/BU
X1 2
X2 A
X6 A
X2 A
X1 19
20
36
X2 A
X1 A
X1 1
X4 20
E40
Electrical
Auxiliary
Heater
G13E
Generator -
Auxiliary
X50A
Fuse Block -
Underhood
G13
Generator
X51R
Fuse Block -
Instrument
Panel Right
X51B
Fuse
Block -
Instrument
Panel
Auxiliary
M64
Starter
Motor
X50E
Fuse Block
- Battery
Auxiliary
K34
Glow Plug
Control
Module
K9
Body
Control
Module
LOC
DESC

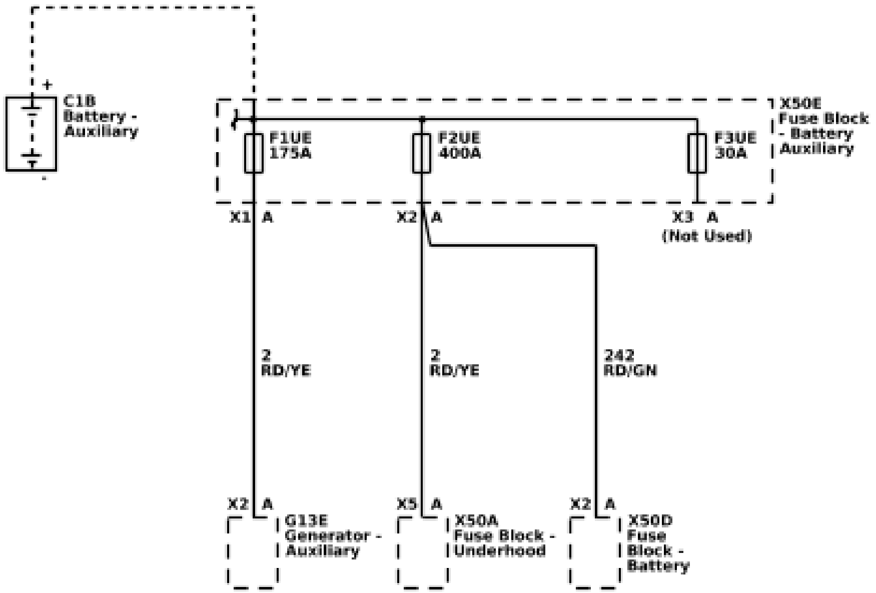
5995523

Power Distribution Schematics (X50E Fuse Block - Battery Auxiliary (K4B))


C18
Battery - Auxiliary
+
-
X50E
Fuse Block - Battery Auxiliary
KR79
Auxiliary Battery Relay 2
F3UE
30A
F2UE
175A
F1UE
100A
X3 A
X2 A
(Not Used)
X1 A
742
RD/GN
X103 1
742
RD/GN
X480 E
742
RD/GN
J421
742
RD/GN
X481 E
742
RD/GN
742
RD/GN
742
RD/GN
742
RD/GN
E
E
X88
Trailer Connector
X88G
Trailer Connector - 5th Wheel
W8
Blunt Cut - Trailer Provision
242
RD/GN
X7 A
X50D
Fuse Block - Battery

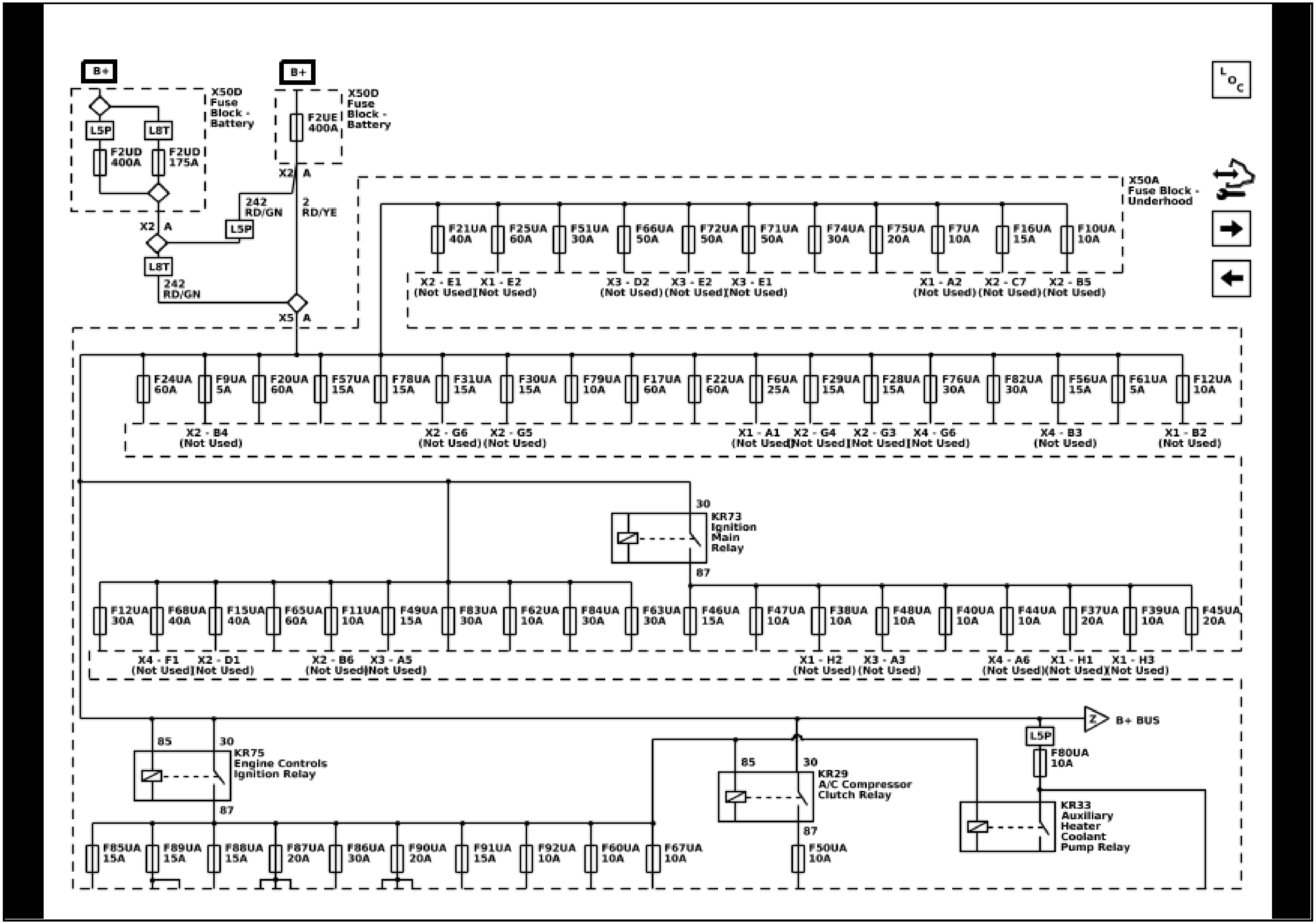
5995524

Power Distribution Schematics (X50E Fuse Block - Battery Auxiliary (L5P))


C1B
Battery - Auxiliary
+
-
X50E
Fuse Block - Battery Auxiliary
F1UE
175A
F2UE
400A
F3UE
30A
X1 A
X2 A
X3 A
(Not Used)
2
RD/YE
2
RD/YE
242
RD/GN
X2 A
G13E
Generator - Auxiliary
X5 A
X50A
Fuse Block - Underhood
X2 A
X50D
Fuse Block - Battery

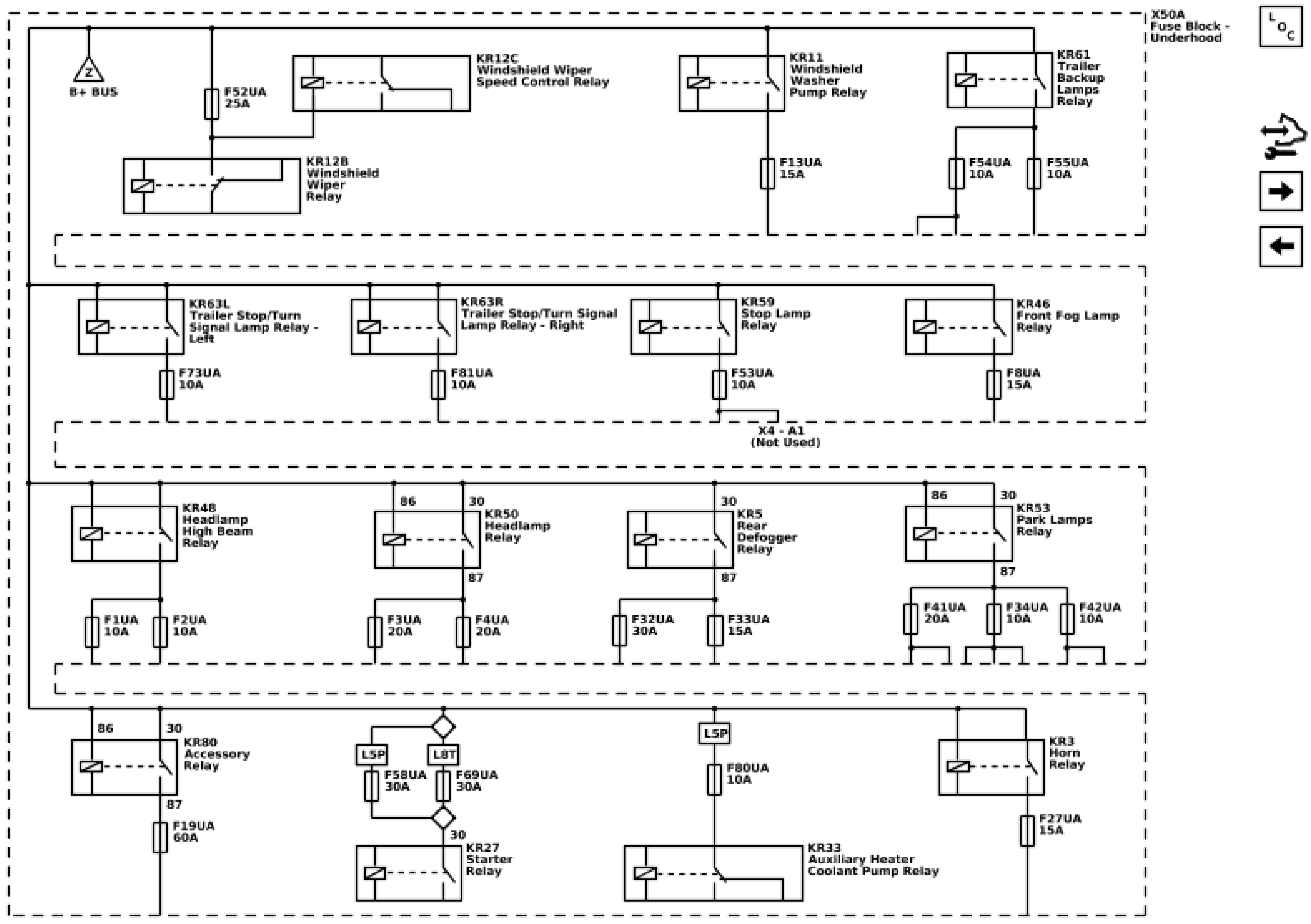
5995525

Power Distribution Schematics (X50A Underhood Fuse Block Bussing (1 of 2))


B+
X50D Fuse Block - Battery
L5P
L8T
F2UD 400A
F2UD 175A
X2 A
242 RD/GN
L5P
L8T
242 RD/GN
B+
F2UE 400A
X50D Fuse Block - Battery
X2 A
2 RD/YE
X5 A
X50A Fuse Block - Underhood
F21UA 40A
F25UA 60A
F51UA 30A
F66UA 50A
F72UA 50A
F71UA 50A
F74UA 30A
F75UA 20A
F7UA 10A
F16UA 15A
F10UA 10A
X2 - E1 (Not Used)
X1 - E2 (Not Used)
X3 - D2 (Not Used)
X3 - E2 (Not Used)
X3 - E1 (Not Used)
X1 - A2 (Not Used)
X2 - C7 (Not Used)
X2 - B5 (Not Used)
F24UA 60A
F9UA 5A
F20UA 60A
F57UA 15A
F78UA 15A
F31UA 15A
F30UA 15A
F79UA 10A
F17UA 60A
F22UA 60A
F6UA 25A
F29UA 15A
F28UA 15A
F76UA 30A
F82UA 30A
F56UA 15A
F61UA 5A
F12UA 10A
X2 - B4 (Not Used)
X2 - G6 (Not Used)
X2 - G5 (Not Used)
X1 - A1 (Not Used)
X2 - G4 (Not Used)
X2 - G3 (Not Used)
X4 - G6 (Not Used)
X4 - B3 (Not Used)
X1 - B2 (Not Used)
30
KR73 Ignition Main Relay
87
F12UA 30A
F68UA 40A
F15UA 40A
F65UA 60A
F11UA 10A
F49UA 15A
F83UA 30A
F62UA 10A
F84UA 30A
F63UA 30A
F46UA 15A
F47UA 10A
F38UA 10A
F48UA 10A
F40UA 10A
F44UA 10A
F37UA 20A
F39UA 10A
F45UA 20A
X4 - F1 (Not Used)
X2 - D1 (Not Used)
X2 - B6 (Not Used)
X3 - A5 (Not Used)
X1 - H2 (Not Used)
X3 - A3 (Not Used)
X4 - A6 (Not Used)
X1 - H1 (Not Used)
X1 - H3 (Not Used)
Z
B+ BUS
85
30
KR75 Engine Controls Ignition Relay
87
85
30
KR29 A/C Compressor Clutch Relay
87
L5P
F80UA 10A
KR33 Auxiliary Heater Coolant Pump Relay
F85UA 15A
F89UA 15A
F88UA 15A
F87UA 20A
F86UA 30A
F90UA 20A
F91UA 15A
F92UA 10A
F60UA 10A
F67UA 10A
F50UA 10A
L O C

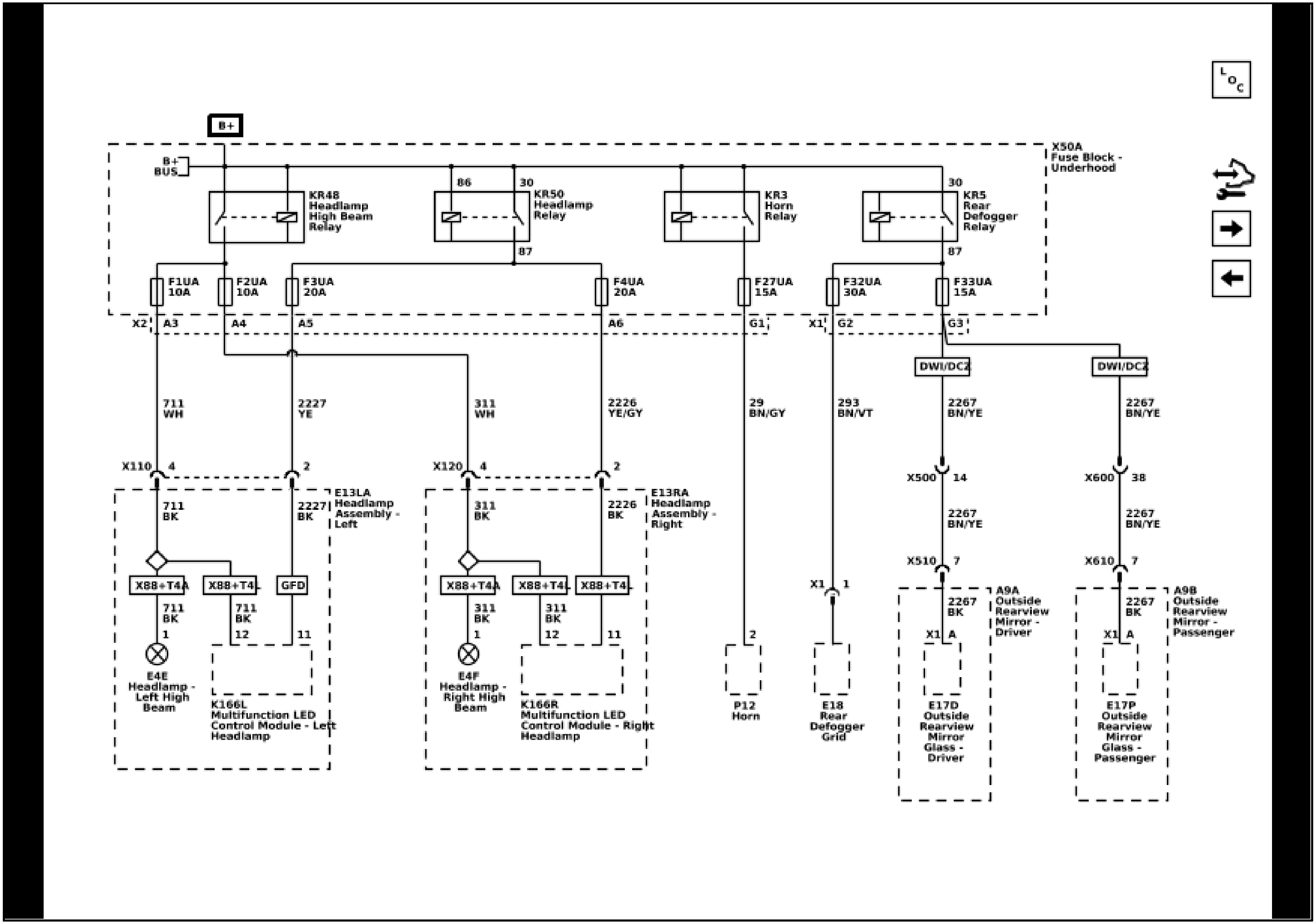
5995526

Power Distribution Schematics (X50A Underhood Fuse Block Bussing (2 of 2))


X50A
Fuse Block - Underhood
B+ BUS
F52UA 25A
KR12C Windshield Wiper Speed Control Relay
KR12B Windshield Wiper Relay
KR11 Windshield Washer Pump Relay
F13UA 15A
KR61 Trailer Backup Lamps Relay
F54UA 10A
F55UA 10A
KR63L Trailer Stop/Turn Signal Lamp Relay - Left
F73UA 10A
KR63R Trailer Stop/Turn Signal Lamp Relay - Right
F81UA 10A
KR59 Stop Lamp Relay
F53UA 10A
X4 - A1 (Not Used)
KR46 Front Fog Lamp Relay
F8UA 15A
KR48 Headlamp High Beam Relay
F1UA 10A
F2UA 10A
86
30
KR50 Headlamp Relay
87
F3UA 20A
F4UA 20A
30
KR5 Rear Defogger Relay
87
F32UA 30A
F33UA 15A
86
30
KR53 Park Lamps Relay
87
F41UA 20A
F34UA 10A
F42UA 10A
86
30
KR80 Accessory Relay
87
F19UA 60A
L5P
L8T
F58UA 30A
F69UA 30A
30
KR27 Starter Relay
L5P
F80UA 10A
KR33 Auxiliary Heater Coolant Pump Relay
KR3 Horn Relay
F27UA 15A

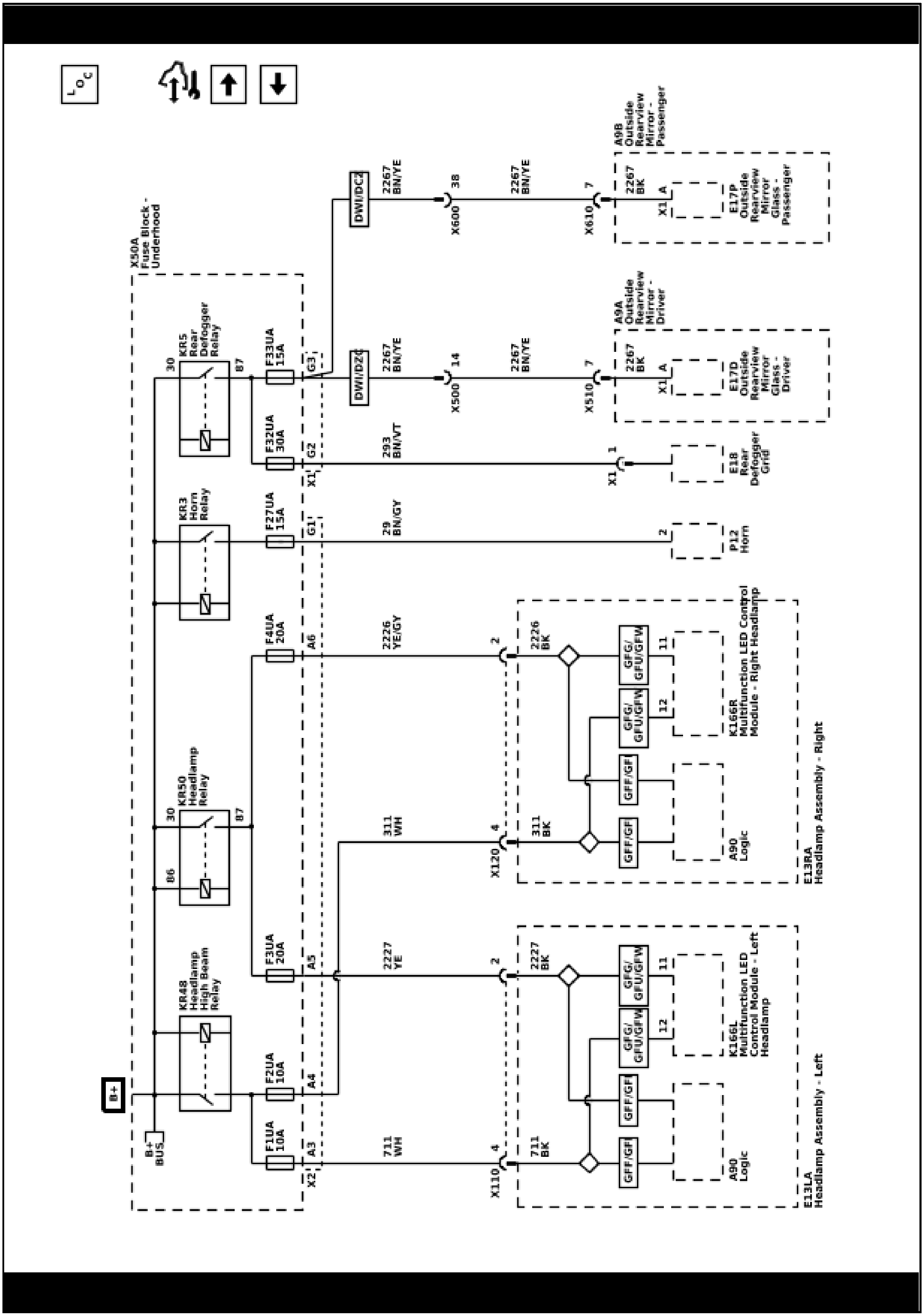
5995527

Power Distribution Schematics (F1UA, F2UA, F3UA, F4UA, F27UA, F32UA and F33UA Fuses (X88))

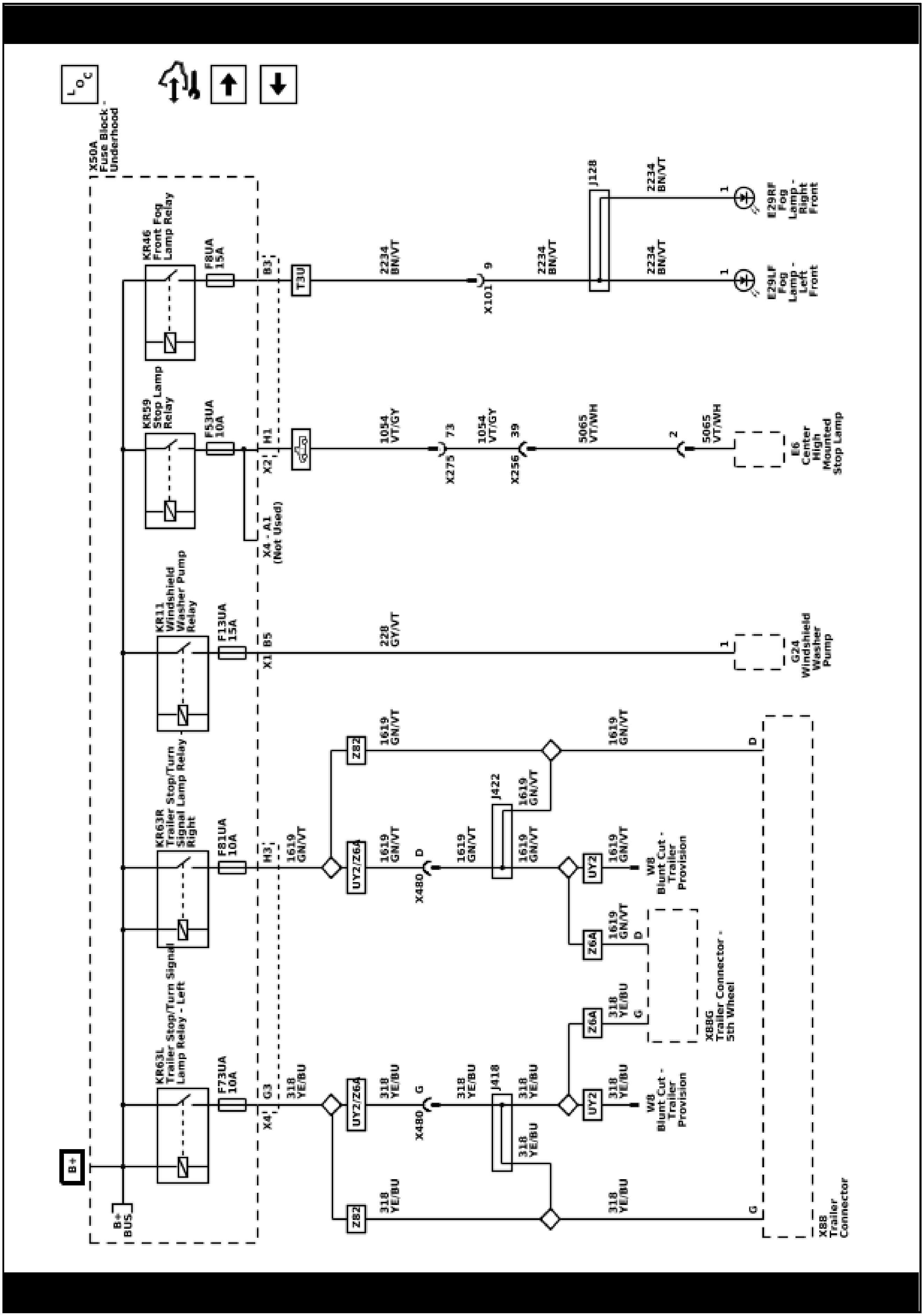

B+
B+ BUS
X50A Fuse Block - Underhood
KR48 Headlamp High Beam Relay
86
30
KR50 Headlamp Relay
87
KR3 Horn Relay
30
KR5 Rear Defogger Relay
87
F1UA 10A
F2UA 10A
F3UA 20A
F4UA 20A
F27UA 15A
F32UA 30A
F33UA 15A
X2
A3
A4
A5
A6
G1
X1
G2
G3
DWI/DC2
DWI/DC2
711 WH
2227 YE
311 WH
2226 YE/GY
29 BN/GY
293 BN/VT
2267 BN/YE
2267 BN/YE
X110
4
2
X120
4
2
X500
14
X600
38
711 BK
2227 BK
E13LA Headlamp Assembly - Left
311 BK
2226 BK
E13RA Headlamp Assembly - Right
2267 BN/YE
2267 BN/YE
X510
7
X610
7
X88+T4A
X88+T4L
GFD
X88+T4A
X88+T4L
X88+T4L
X1
1
711 BK
711 BK
311 BK
311 BK
2267 BK
A9A Outside Rearview Mirror - Driver
2267 BK
A9B Outside Rearview Mirror - Passenger
1
12
11
1
12
11
2
X1
A
X1
A
E4E Headlamp - Left High Beam
K166L Multifunction LED Control Module - Left Headlamp
E4F Headlamp - Right High Beam
K166R Multifunction LED Control Module - Right Headlamp
P12 Horn
E18 Rear Defogger Grid
E17D Outside Rearview Mirror Glass - Driver
E17P Outside Rearview Mirror Glass - Passenger

5995528

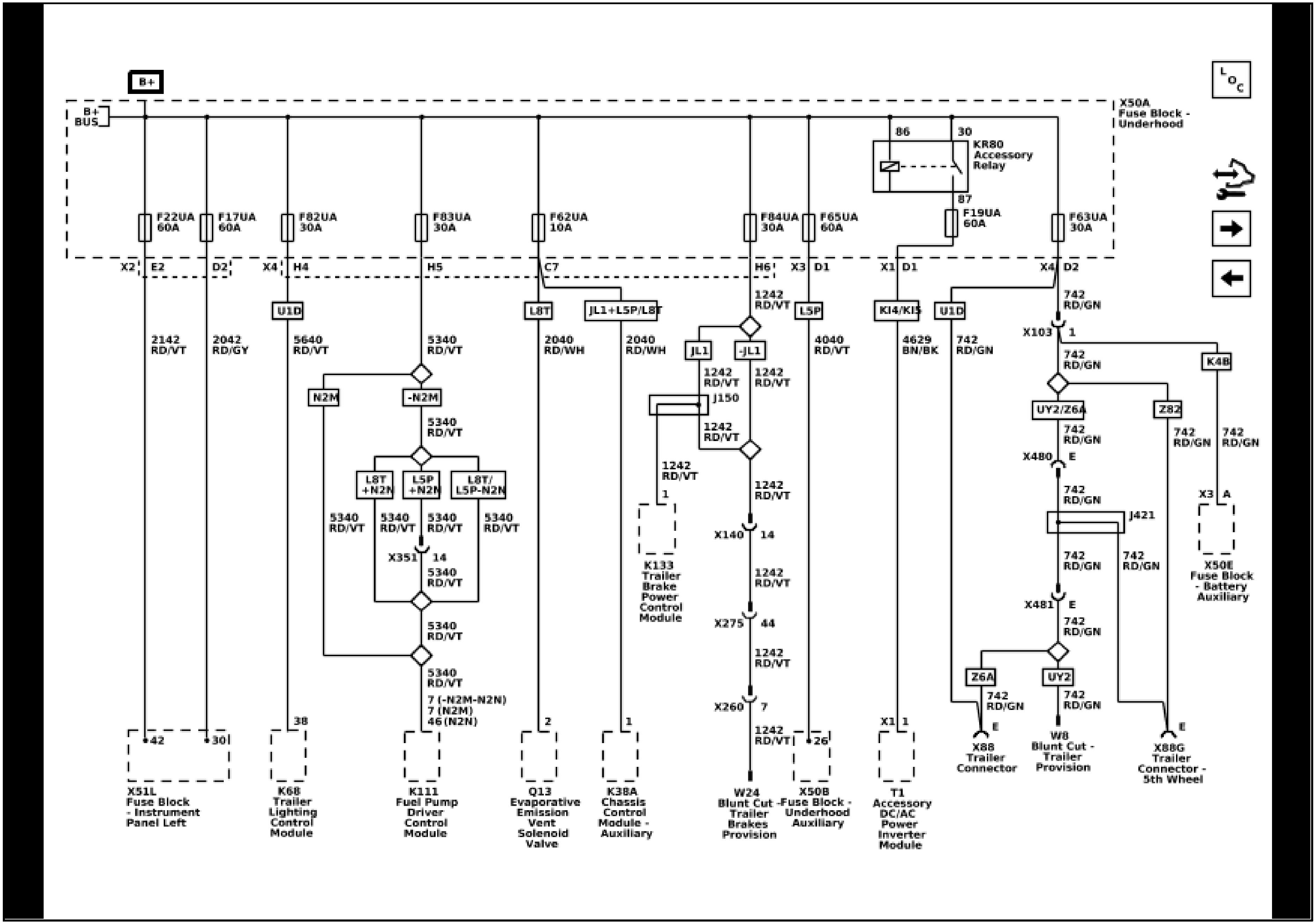
Power Distribution Schematics (F1UA, F2UA, F3UA, F4UA, F27UA, F32UA and F33UA Fuses (Z88))


5995529
B+
B+ BUS
X50A Fuse Block - Underhood
KR48 Headlamp High Beam Relay
KR50 Headlamp Relay
KR3 Horn Relay
KR5 Rear Defogger Relay
30
86
87
F1UA 10A
F2UA 10A
F3UA 20A
F4UA 20A
F27UA 15A
F32UA 30A
F33UA 15A
X2
A3
A4
A5
A6
G1
X1
G2
G3
DWI/DC2
711 WH
2227 YE
311 WH
2226 YE/GY
29 BN/GY
293 BN/VT
2267 BN/YE
X110
X120
4
2
711 BK
2227 BK
311 BK
2226 BK
GFF/GF
GFG/ GFU/GFW
11
12
A90 Logic
K166L Multifunction LED Control Module - Left Headlamp
K166R Multifunction LED Control Module - Right Headlamp
E13LA Headlamp Assembly - Left
E13RA Headlamp Assembly - Right
P12 Horn
X1
1
E18 Rear Defogger Grid
X500
14
X510
7
2267 BK
X1 A
E17D Outside Rearview Mirror Glass - Driver
A9A Outside Rearview Mirror - Driver
X600
38
X610
E17P Outside Rearview Mirror Glass - Passenger
A9B Outside Rearview Mirror - Passenger
L O C

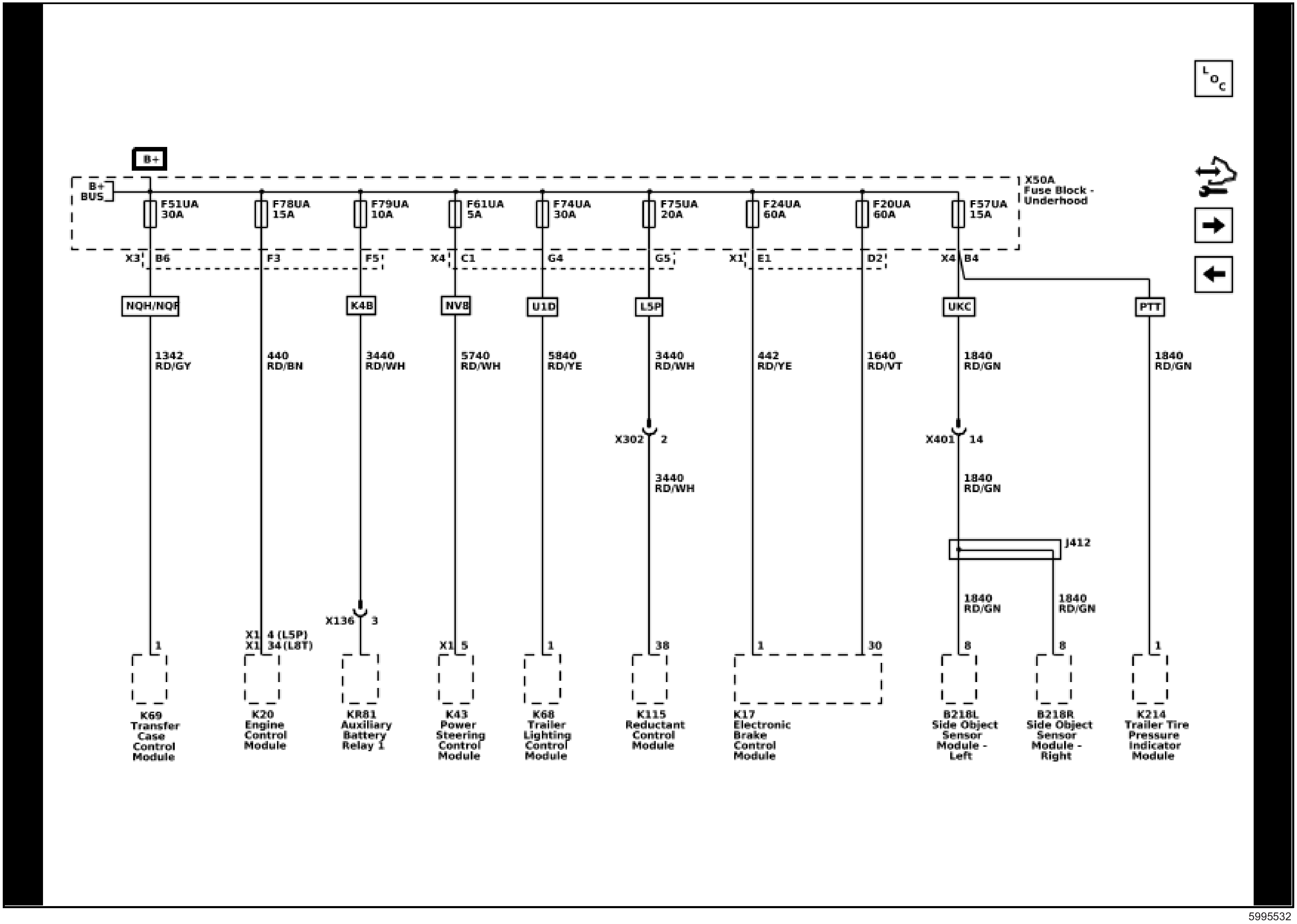
Power Distribution Schematics (F8UA, F13UA, F53UA, F73UA and F81UA Fuses)


5995530
X50A Fuse Block - Underhood
B+
B+ BUS
KR46 Front Fog Lamp Relay
F8UA 15A
B3
T3U
2234 BN/VT
X101
9
2234 BN/VT
J128
2234 BN/VT
2234 BN/VT
1
1
E29LF Fog Lamp - Left Front
E29RF Fog Lamp - Right Front
KR59 Stop Lamp Relay
F53UA 10A
H1
X2
X4 - A1 (Not Used)
1054 VT/GY
X275
73
1054 VT/GY
X256
39
5065 VT/WH
2
5065 VT/WH
E6 Center High Mounted Stop Lamp
KR11 Windshield Washer Pump Relay
F13UA 15A
X1
B5
228 GY/VT
1
G24 Windshield Washer Pump
KR63R Trailer Stop/Turn Signal Lamp Relay - Right
F81UA 10A
H3
1619 GN/VT
Z82
1619 GN/VT
UY2/Z64
1619 GN/VT
X480
D
1619 GN/VT
J422
1619 GN/VT
1619 GN/VT
1619 GN/VT
UY2
1619 GN/VT
W8 Blunt Cut - Trailer Provision
Z6A
1619 GN/VT
D
D
X88G Trailer Connector - 5th Wheel
KR63L Trailer Stop/Turn Signal Lamp Relay - Left
F73UA 10A
X4
G3
318 YE/BU
UY2/Z64
318 YE/BU
X480
G
318 YE/BU
J418
318 YE/BU
318 YE/BU
UY2
318 YE/BU
W8 Blunt Cut - Trailer Provision
Z6A
318 YE/BU
G
Z82
318 YE/BU
318 YE/BU
G
X88 Trailer Connector

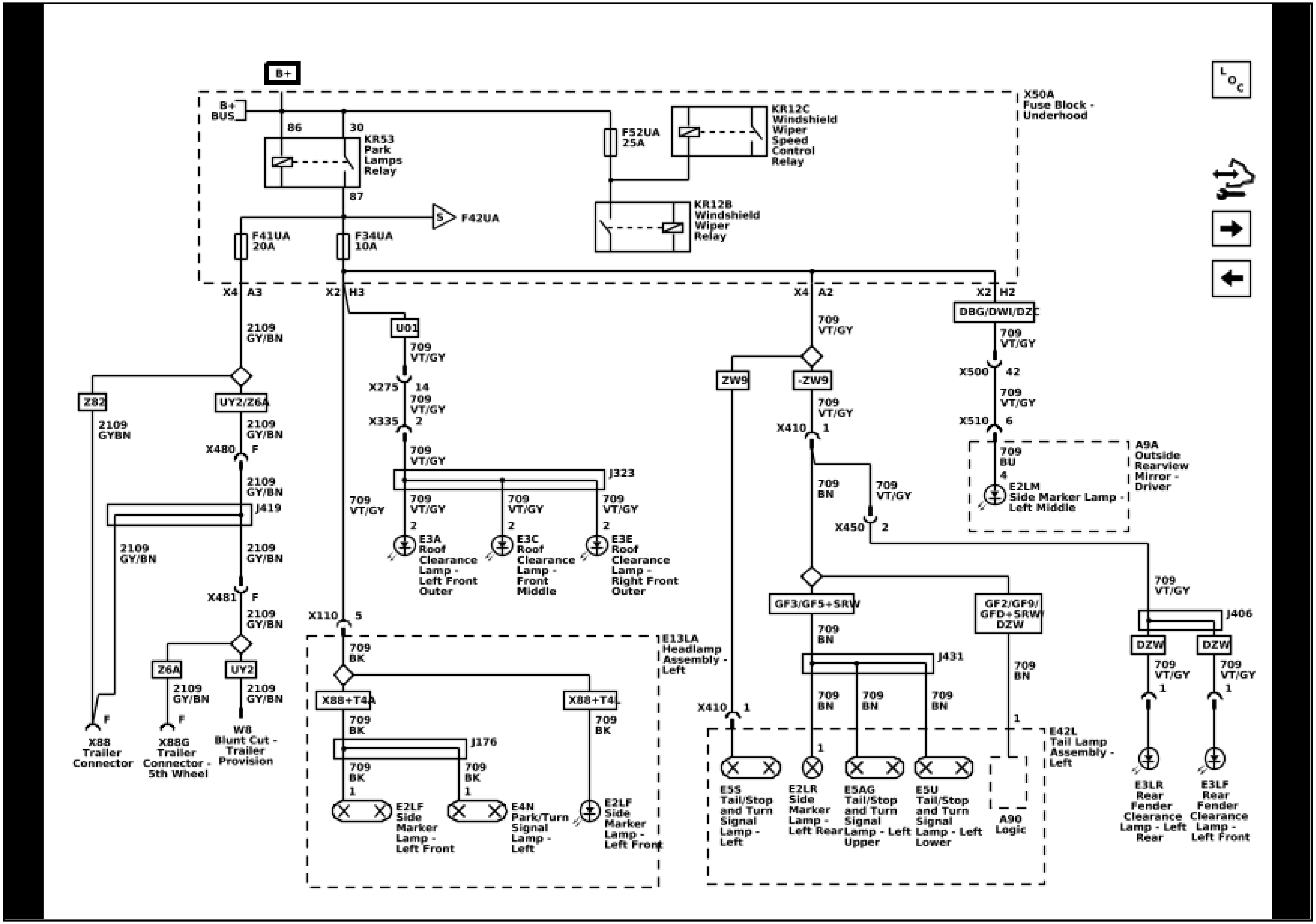
Power Distribution Schematics (F17UA, F19UA, F22UA, F62UA, F63UA, F65UA, F82UA, F83UA and F84UA Fuses)


B+
B+ BUS
X50A Fuse Block - Underhood
F22UA 60A
F17UA 60A
F82UA 30A
F83UA 30A
F62UA 10A
F84UA 30A
F65UA 60A
F19UA 60A
F63UA 30A
86
30
87
KR80 Accessory Relay
X2 E2
D2
X4 H4
H5
C7
H6
X3 D1
X1 D1
X4 D2
U1D
L8T
JL1+L5P/L8T
L5P
KI4/KI5
2142 RD/VT
2042 RD/GY
5640 RD/VT
5340 RD/VT
2040 RD/WH
1242 RD/VT
4040 RD/VT
4629 BN/BK
742 RD/GN
N2M
-N2M
L8T +N2N
L5P +N2N
L8T/ L5P-N2N
X351 14
7 (-N2M-N2N)
7 (N2M)
46 (N2N)
JL1
-JL1
J150
X140 14
X275 44
X260 7
X103 1
K4B
UY2/Z6A
Z82
X480 E
J421
X481 E
Z6A
UY2
X3 A
X51L Fuse Block - Instrument Panel Left
42
30
K68 Trailer Lighting Control Module
38
K111 Fuel Pump Driver Control Module
Q13 Evaporative Emission Vent Solenoid Valve
2
K38A Chassis Control Module - Auxiliary
1
K133 Trailer Brake Power Control Module
1
W24 Blunt Cut - Trailer Brakes Provision
X50B Fuse Block - Underhood Auxiliary
26
X1 1
T1 Accessory DC/AC Power Inverter Module
X88 Trailer Connector
E
W8 Blunt Cut - Trailer Provision
X88G Trailer Connector - 5th Wheel
E
X50E Fuse Block - Battery Auxiliary
5995531

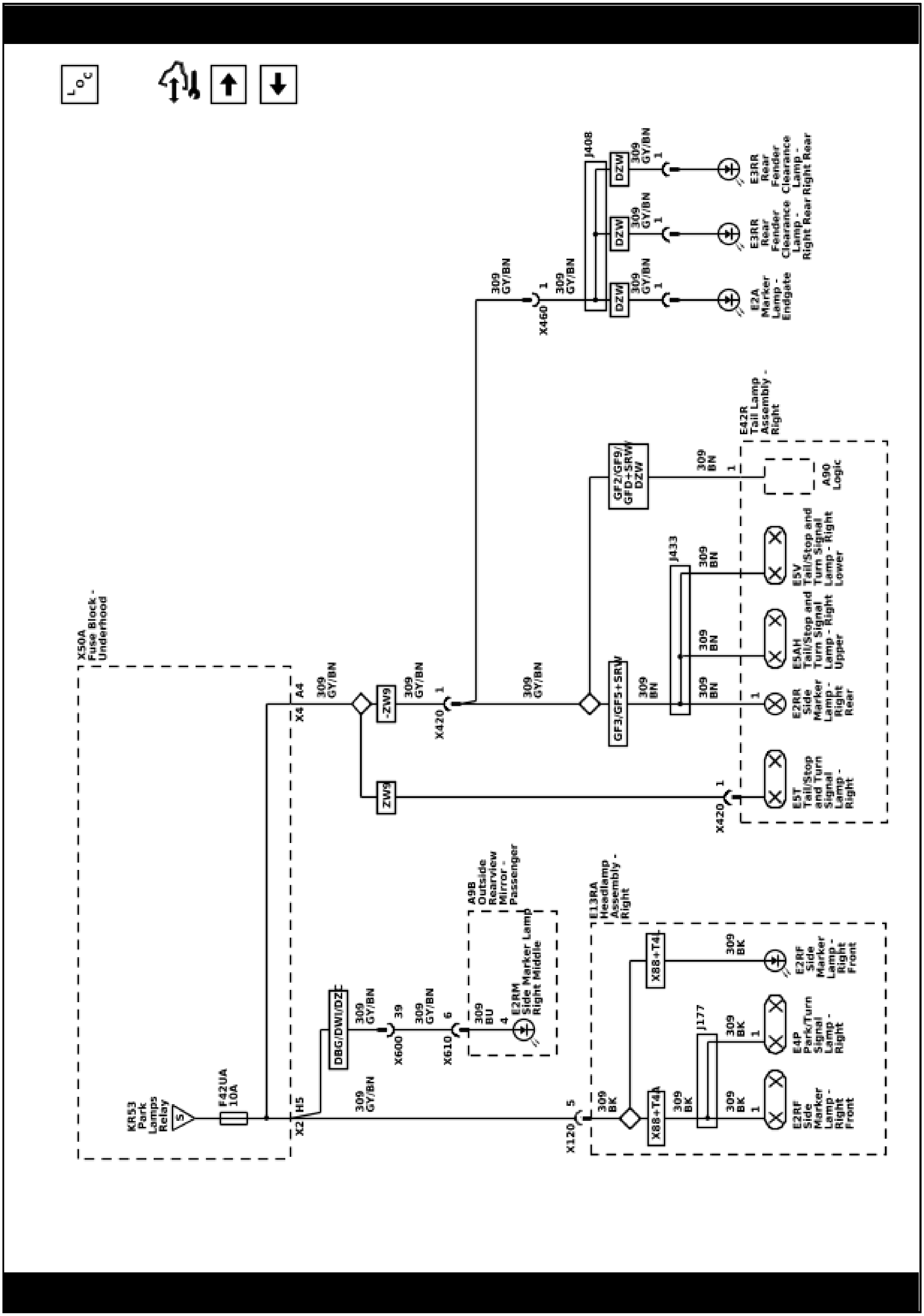
Power Distribution Schematics (F20UA, F24UA, F51UA, F57UA, F61UA, F74Ua, F75UA, F78UA and F79UA Fuses)


B+
B+ BUS
X50A Fuse Block - Underhood
F51UA 30A
F78UA 15A
F79UA 10A
F61UA 5A
F74UA 30A
F75UA 20A
F24UA 60A
F20UA 60A
F57UA 15A
X3 B6
F3
F5
X4 C1
G4
G5
X1 E1
D2
X4 B4
NQH/NQF
K4B
NV8
U1D
L5P
UKC
PTT
1342 RD/GY
440 RD/BN
3440 RD/WH
5740 RD/WH
5840 RD/YE
3440 RD/WH
442 RD/YE
1640 RD/VT
1840 RD/GN
1840 RD/GN
X302 2
3440 RD/WH
X401 14
1840 RD/GN
J412
1840 RD/GN
1840 RD/GN
X136 3
1
X1 4 (L5P)
X1 34 (L8T)
X1 5
1
38
1
30
8
8
1
K69 Transfer Case Control Module
K20 Engine Control Module
KR81 Auxiliary Battery Relay 1
K43 Power Steering Control Module
K68 Trailer Lighting Control Module
K115 Reductant Control Module
K17 Electronic Brake Control Module
B218L Side Object Sensor Module - Left
B218R Side Object Sensor Module - Right
K214 Trailer Tire Pressure Indicator Module
5995532

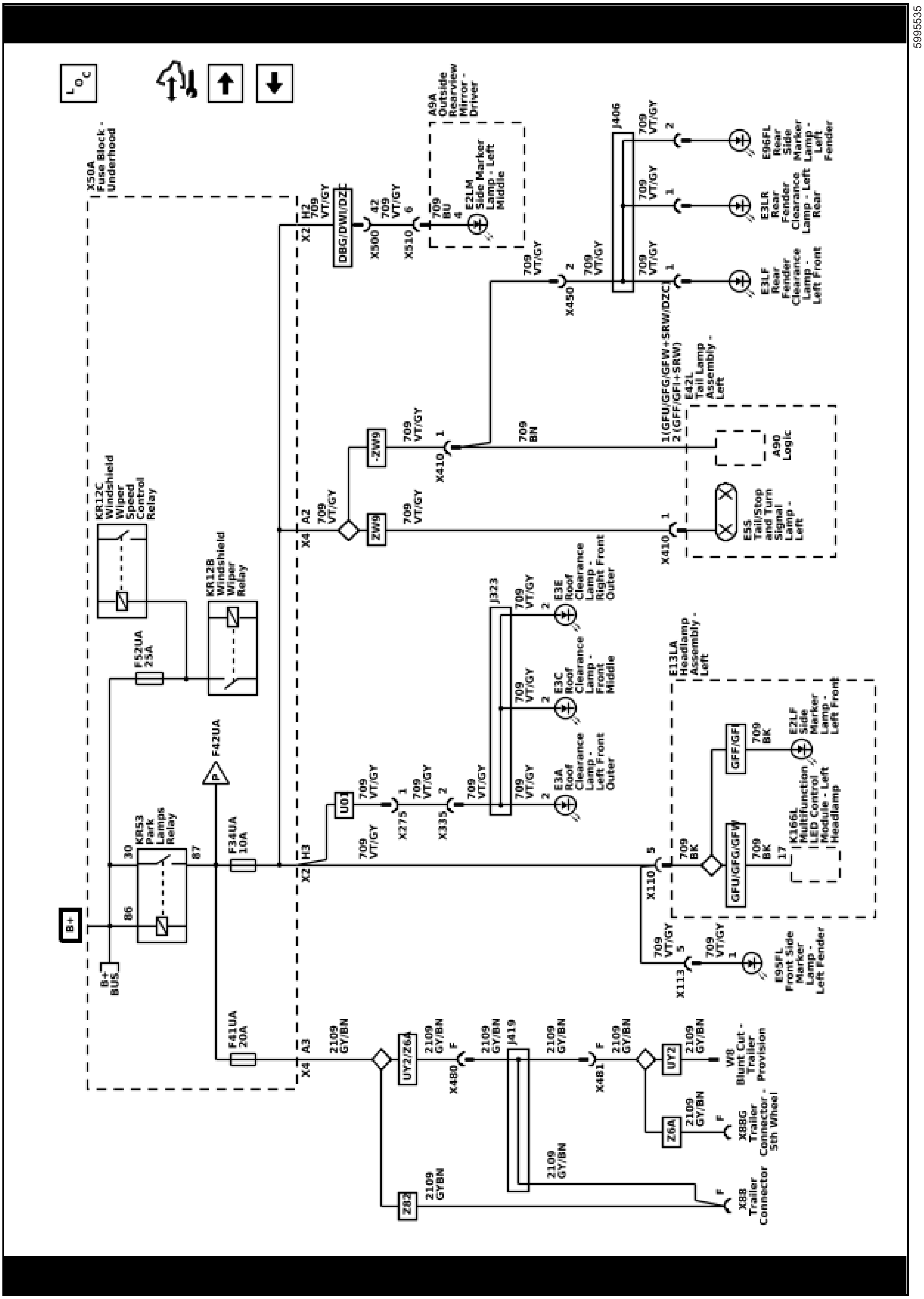
Power Distribution Schematics (F34UA, F41UA and F52UA Fuses (X88) (1 of 2))


B+
B+ BUS
86
30
KR53 Park Lamps Relay
87
F42UA
F41UA 20A
F34UA 10A
F52UA 25A
KR12C Windshield Wiper Speed Control Relay
KR12B Windshield Wiper Relay
X50A Fuse Block - Underhood
X4 A3
X2 H3
X4 A2
X2 H2
2109 GY/BN
Z82
UY2/Z6A
2109 GYBN
X480 F
J419
X481 F
Z6A
UY2
X88 Trailer Connector
X88G Trailer Connector - 5th Wheel
W8 Blunt Cut - Trailer Provision
U01
709 VT/GY
X275 14
X335 2
J323
E3A Roof Clearance Lamp - Left Front Outer
E3C Roof Clearance Lamp - Front Middle
E3E Roof Clearance Lamp - Right Front Outer
X110 5
709 BK
X88+T4A
X88+T4L
J176
E2LF Side Marker Lamp - Left Front
E4N Park/Turn Signal Lamp - Left
E13LA Headlamp Assembly - Left
ZW9
-ZW9
X410 1
709 BN
X450 2
GF3/GF5+SRW
GF2/GF9/GFD+SRW DZW
J431
E5S Tail/Stop and Turn Signal Lamp - Left
E2LR Side Marker Lamp - Left Rear
E5AG Tail/Stop and Turn Signal Lamp - Left Upper
E5U Tail/Stop and Turn Signal Lamp - Left Lower
A90 Logic
E42L Tail Lamp Assembly - Left
DBG/DWI/DZC
X500 42
X510 6
709 BU
4
E2LM Side Marker Lamp - Left Middle
A9A Outside Rearview Mirror - Driver
J406
DZW
E3LR Rear Fender Clearance Lamp - Left Rear
E3LF Rear Fender Clearance Lamp - Left Front
5995533

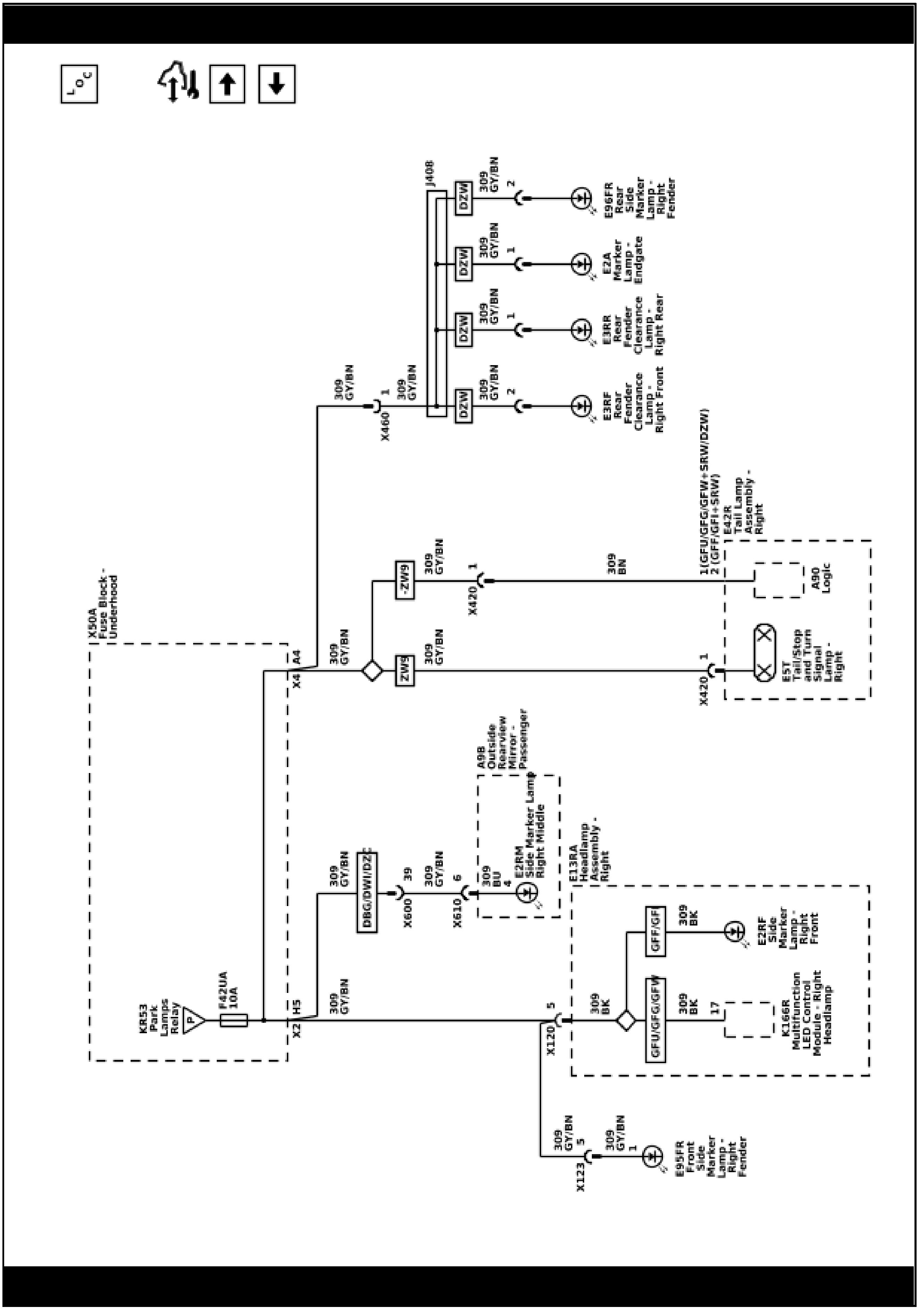
Power Distribution Schematics (F42UA Fuses (X88) (2 of 2))


5995534
X50A Fuse Block - Underhood
KR53 Park Lamps Relay
5
F42UA 10A
X2 H5
X4 A4
309 GY/BN
DBG/DWI/DZ
X600 39
X610 6
309 BU 4
A9B Outside Rearview Mirror - Passenger
E2RM Side Marker Lamp Right Middle
X120 5
309 BK
X88+T4A
X88+T4
J177
E13RA Headlamp Assembly - Right
E2RF Side Marker Lamp - Right Front
E4P Park/Turn Signal Lamp - Right
-ZW9
ZW9
X420 1
GF3/GF5+SRW
GF2/GF9/GFD+SRW DZW
309 BN
J433
E2RR Side Marker Lamp - Right Rear
E5AH Tail/Stop and Turn Signal Lamp - Right Upper
E5V Tail/Stop and Turn Signal Lamp - Right Lower
E5T Tail/Stop and Turn Signal Lamp - Right
A90 Logic
E42R Tail Lamp Assembly - Right
X460 1
J408
DZW
E2A Marker Lamp - Endgate
E3RR Rear Fender Clearance Lamp - Right Rear
E3RR Rear Fender Clearance Lamp - Right Rear

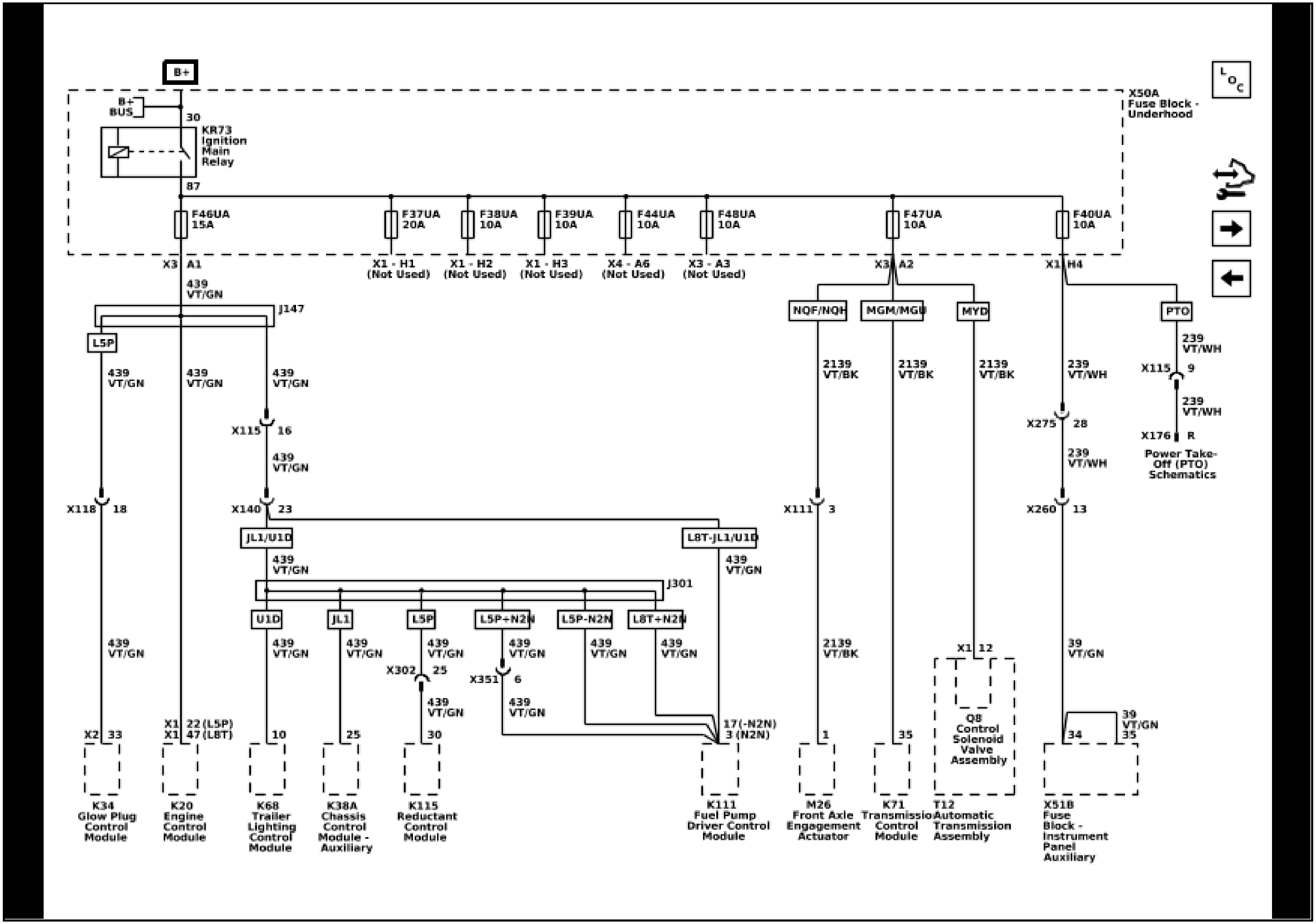
Power Distribution Schematics (F34UA, F41UA and F52UA Fuses (Z88) (1 of 2))


5995535
X50A Fuse Block - Underhood
B+
B+ BUS
KR53 Park Lamps Relay
30
86
87
F52UA 25A
F34UA 10A
F41UA 20A
F42UA
P
KR12C Windshield Wiper Speed Control Relay
KR12B Windshield Wiper Relay
X2 H2 709 VT/GY
DBG/DWI/DZ
X500 42 709 VT/GY
X510 6 709 BU 4
E2LM Side Marker Lamp - Left Middle
A9A Outside Rearview Mirror - Driver
X4 A2 709 VT/GY
ZW9
-ZW9
X410 1 709 VT/GY
709 BN
1(GFU/GFG/GFW+SRW/DZC) 2 (GFF/GFI+SRW)
E42L Tail Lamp Assembly - Left
A90 Logic
E5S Tail/Stop and Turn Signal Lamp - Left
X450 2 709 VT/GY
J406
E3LF Rear Fender Clearance Lamp - Left Front
E3LR Rear Fender Clearance Lamp - Left Rear
E96FL Rear Side Marker Lamp - Left Fender
X2 H3 709 VT/GY
U01
X275 1
X335 2
J323
E3A Roof Clearance Lamp - Left Front Outer
E3C Roof Clearance Lamp - Front Middle
E3E Roof Clearance Lamp - Right Front Outer
X110 5 709 BK
GFU/GFG/GFW
GFF/GFI
K166L Multifunction LED Control Module - Left Headlamp
17
E2LF Side Marker Lamp- Left Front
E13LA Headlamp Assembly - Left
X113 5 709 VT/GY 1
E95FL Front Side Marker Lamp - Left Fender
X4 A3 2109 GY/BN
UY2/Z6A
X480 F
J419
X481 F
UY2
W8 Blunt Cut - Trailer Provision
Z6A
X88G Trailer Connector - 5th Wheel
Z82 2109 GYBN
X88 Trailer Connector

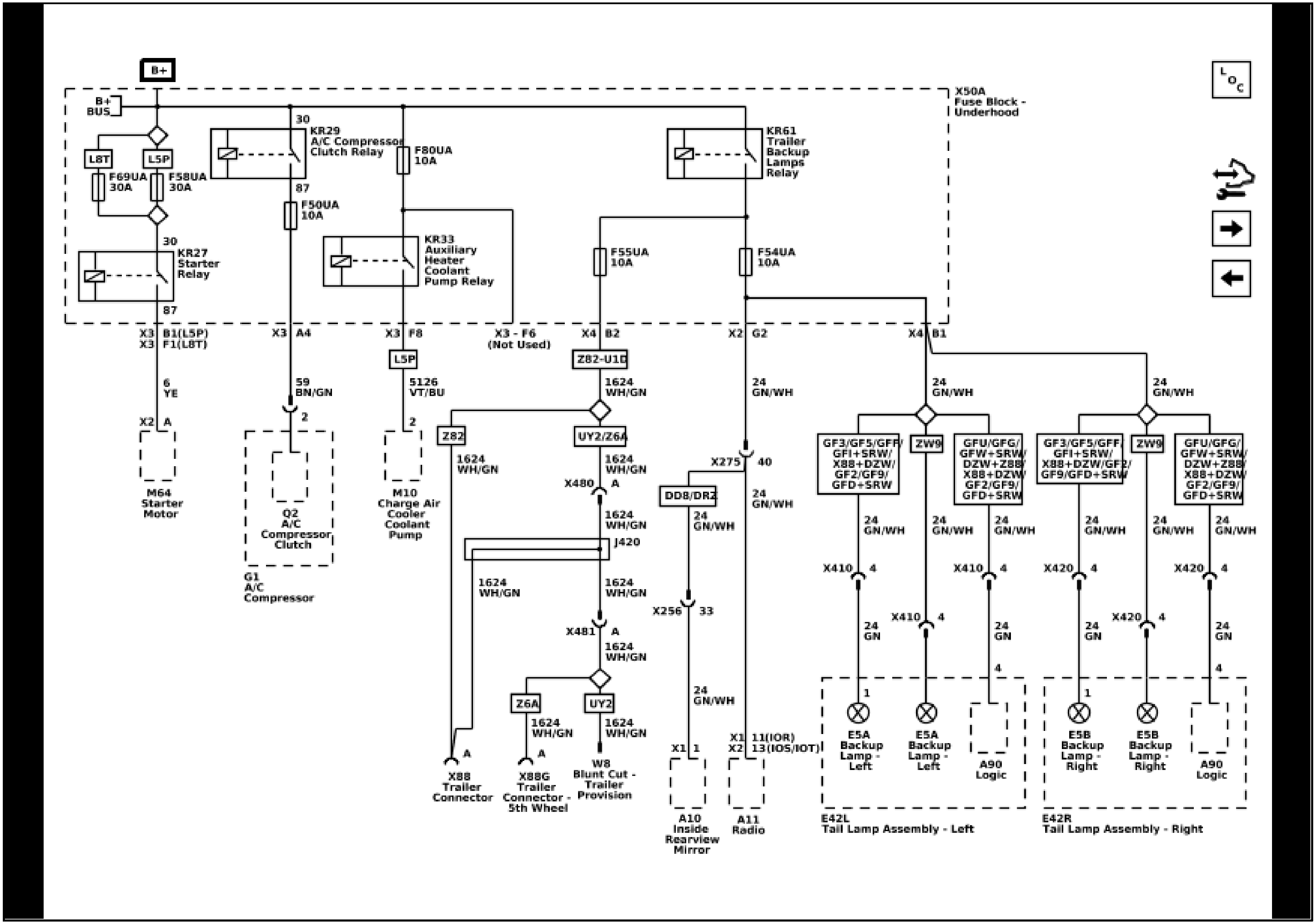
Power Distribution Schematics (F42UA Fuses (Z88) (2 of 2))


5995536
X50A Fuse Block - Underhood
KR53 Park Lamps Relay
P
F42UA 10A
X2 H5
X4 A4
309 GY/BN
ZW9
-ZW9
X420 1
309 BN
1(GFU/GFG/GFW+SRW/DZW) 2 (GFF/GFI+SRW)
E42R Tail Lamp Assembly - Right
A90 Logic
E5T Tail/Stop and Turn Signal Lamp - Right
X460 1
J408
DZW
E3RF Rear Fender Clearance Lamp - Right Front
E3RR Rear Fender Clearance Lamp - Right Rear
E2A Marker Lamp - Endgate
E96FR Rear Side Marker Lamp - Right Fender
DBG/DWI/DZ
X600 39
X610 6
309 BU 4
A9B Outside Rearview Mirror - Passenger
E2RM Side Marker Lamp Right Middle
E13RA Headlamp Assembly - Right
X120 5
309 BK
GFU/GFG/GFW
GFF/GFI
17
K166R Multifunction LED Control Module - Right Headlamp
E2RF Side Marker Lamp - Right Front
X123 5
E95FR Front Side Marker Lamp - Right Fender

Power Distribution Schematics (F37UA, F38UA, F39UA, F40UA, F44UA, F46UA, F47UA and F48UA Fuses)

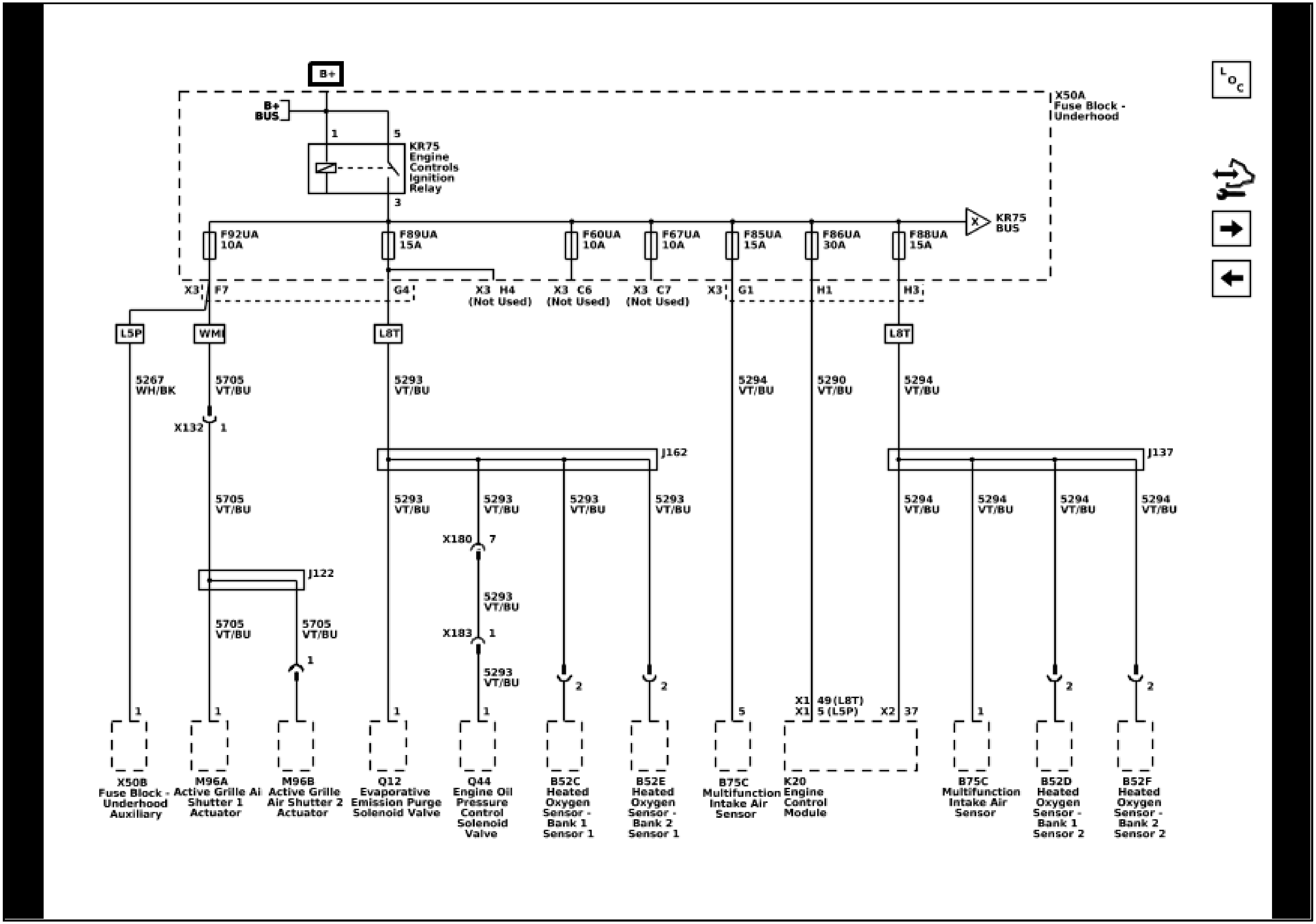

B+
B+ BUS
30
KR73 Ignition Main Relay
87
X50A Fuse Block - Underhood
F46UA 15A
F37UA 20A
F38UA 10A
F39UA 10A
F44UA 10A
F48UA 10A
F47UA 10A
F40UA 10A
X3 A1
X1 - H1 (Not Used)
X1 - H2 (Not Used)
X1 - H3 (Not Used)
X4 - A6 (Not Used)
X3 - A3 (Not Used)
X3 A2
X1 H4
439 VT/GN
J147
L5P
439 VT/GN
439 VT/GN
439 VT/GN
X115 16
439 VT/GN
X118 18
X140 23
JL1/U1D
L8T-JL1/U1D
439 VT/GN
439 VT/GN
J301
U1D
JL1
L5P
L5P+N2N
L5P-N2N
L8T+N2N
439 VT/GN
439 VT/GN
439 VT/GN
439 VT/GN
439 VT/GN
439 VT/GN
439 VT/GN
X302 25
X351 6
439 VT/GN
439 VT/GN
X2 33
X1 22 (L5P)
X1 47 (L8T)
10
25
30
17(-N2N)
3 (N2N)
K34 Glow Plug Control Module
K20 Engine Control Module
K68 Trailer Lighting Control Module
K38A Chassis Control Module - Auxiliary
K115 Reductant Control Module
K111 Fuel Pump Driver Control Module
NQF/NQH
MGM/MGU
MYD
2139 VT/BK
2139 VT/BK
2139 VT/BK
X111 3
2139 VT/BK
X1 12
1
35
Q8 Control Solenoid Valve Assembly
M26 Front Axle Engagement Actuator
K71 Transmissio Control Module
T12 Automatic Transmission Assembly
239 VT/WH
X275 28
239 VT/WH
X260 13
39 VT/GN
34
39 VT/GN
35
X51B Fuse Block - Instrument Panel Auxiliary
PTO
239 VT/WH
X115 9
239 VT/WH
X176 R
Power Take-Off (PTO) Schematics
L O C
5995537

Power Distribution Schematics (F50UA, F54UA, F55UA, F58UA, F69UA, and F80UA Fuses)


B+
B+ BUS
X50A Fuse Block - Underhood
L8T
L5P
F69UA 30A
F58UA 30A
30
KR27 Starter Relay
87
KR29 A/C Compressor Clutch Relay
87
F50UA 10A
F80UA 10A
KR33 Auxiliary Heater Coolant Pump Relay
KR61 Trailer Backup Lamps Relay
F55UA 10A
F54UA 10A
X3 B1(L5P)
X3 F1(L8T)
X3 A4
X3 F8
X3 - F6 (Not Used)
X4 B2
X2 G2
X4 B1
6 YE
X2 A
M64 Starter Motor
59 BN/GN
2
Q2 A/C Compressor Clutch
G1 A/C Compressor
L5P
5126 VT/BU
2
M10 Charge Air Cooler Coolant Pump
Z82-U1D
1624 WH/GN
Z82
UY2/Z6A
X480 A
J420
X481 A
Z6A
UY2
X88 Trailer Connector
X88G Trailer Connector - 5th Wheel
W8 Blunt Cut - Trailer Provision
24 GN/WH
X275 40
DD8/DR2
X256 33
X1 1
A10 Inside Rearview Mirror
X1 11(IOR)
X2 13(IOS/IOT)
A11 Radio
GF3/GF5/GFF/ GFI+SRW/ X88+DZW/ GF2/GF9/ GFD+SRW
ZW9
GFU/GFG/ GFW+SRW/ DZW+Z88/ X88+DZW/ GF2/GF9/ GFD+SRW
GF3/GF5/GFF/ GFI+SRW/ X88+DZW/GF2/ GF9/GFD+SRW
X410 4
X420 4
24 GN
1
E5A Backup Lamp - Left
A90 Logic
E5B Backup Lamp - Right
E42L Tail Lamp Assembly - Left
E42R Tail Lamp Assembly - Right

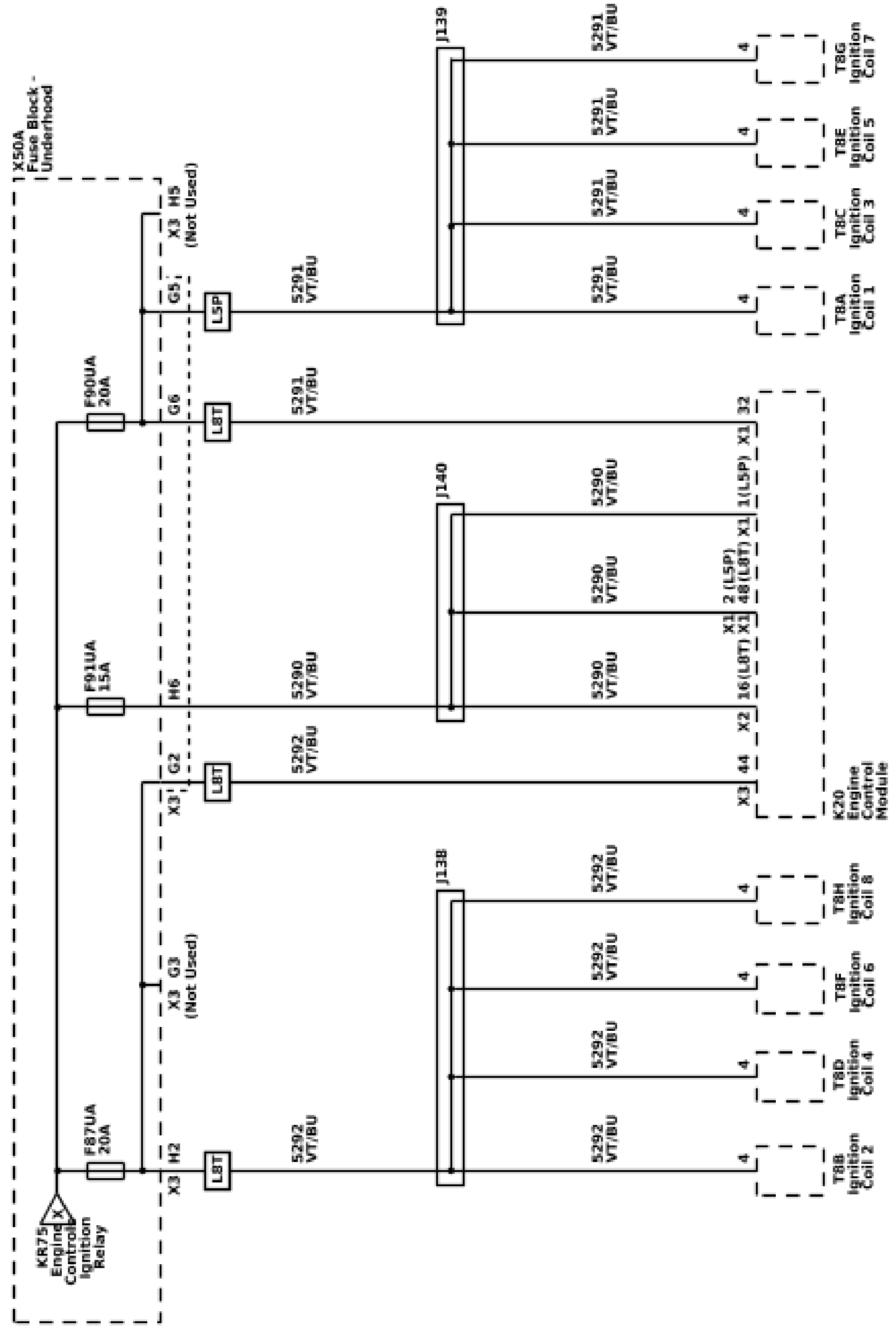
5995538

Power Distribution Schematics (F60UA, F67UA, F85Ua, F86UA, F88UA, F89Ua and F92UA Fuses)

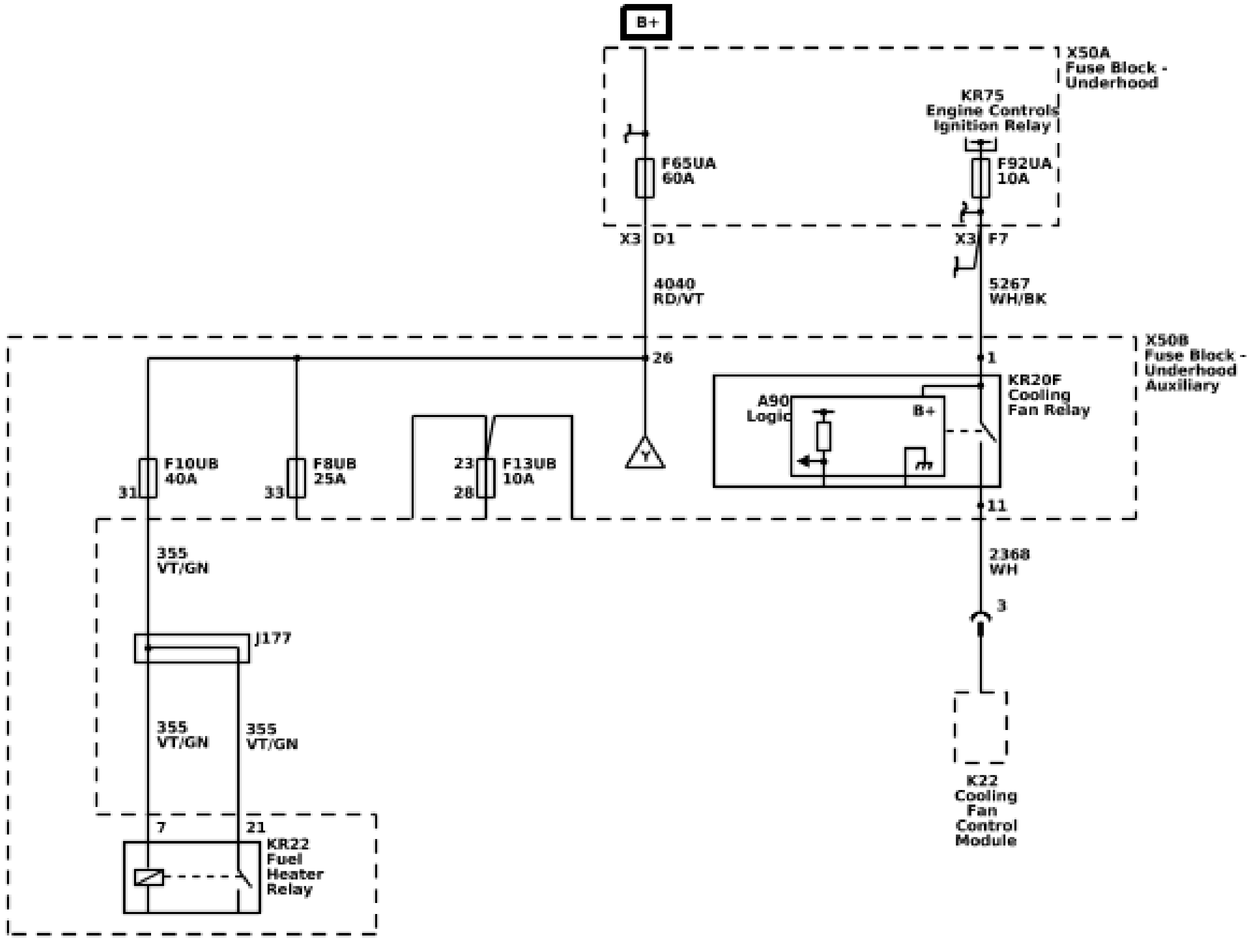

B+
B+ BUS
X50A Fuse Block - Underhood
1
5
KR75 Engine Controls Ignition Relay
3
F92UA 10A
F89UA 15A
F60UA 10A
F67UA 10A
F85UA 15A
F86UA 30A
F88UA 15A
KR75 BUS
X3 F7
G4
X3 H4 (Not Used)
X3 C6 (Not Used)
X3 C7 (Not Used)
X3 G1
H1
H3
L5P
WMI
L8T
L8T
5267 WH/BK
5705 VT/BU
X132 1
5705 VT/BU
J122
5705 VT/BU
5705 VT/BU
1
5293 VT/BU
J162
5293 VT/BU
5293 VT/BU
X180 7
5293 VT/BU
X183 1
5293 VT/BU
5293 VT/BU
5293 VT/BU
2
2
5294 VT/BU
5290 VT/BU
5294 VT/BU
J137
5294 VT/BU
5294 VT/BU
5294 VT/BU
5294 VT/BU
2
2
1
1
1
1
1
5
X1 49 (L8T)
X1 5 (L5P)
X2 37
1
X50B Fuse Block - Underhood Auxiliary
M96A Active Grille Ai Shutter 1 Actuator
M96B Active Grille Air Shutter 2 Actuator
Q12 Evaporative Emission Purge Solenoid Valve
Q44 Engine Oil Pressure Control Solenoid Valve
B52C Heated Oxygen Sensor - Bank 1 Sensor 1
B52E Heated Oxygen Sensor - Bank 2 Sensor 1
B75C Multifunction Intake Air Sensor
K20 Engine Control Module
B75C Multifunction Intake Air Sensor
B52D Heated Oxygen Sensor - Bank 1 Sensor 2
B52F Heated Oxygen Sensor - Bank 2 Sensor 2
LOC
5995539

Power Distribution Schematics (F87UA, F90Ua and F91UA Fuses)

5995540

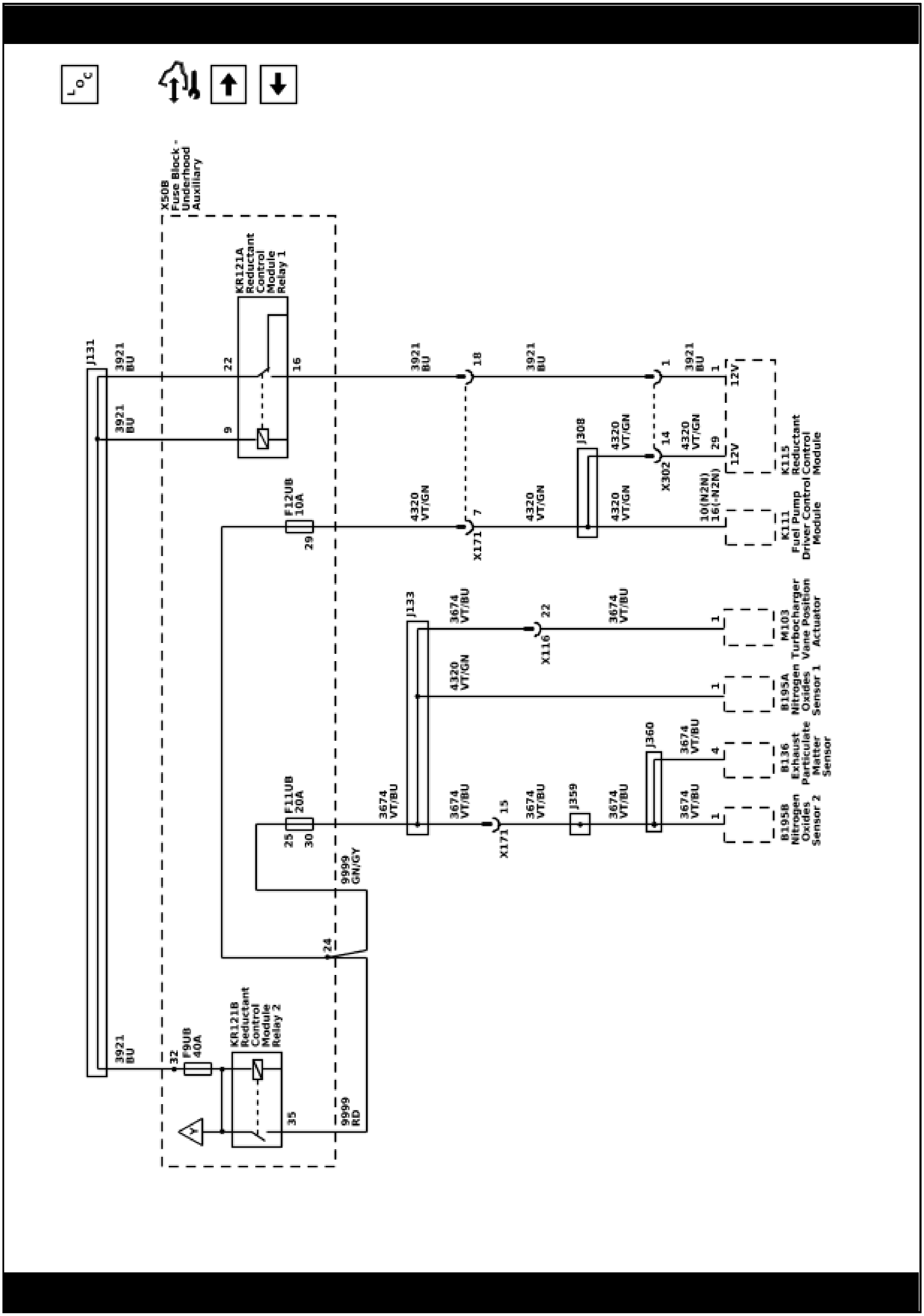

X50A
Fuse Block - Underhood
KR75 Engine Control Ignition Relay
X
F87UA 20A
F91UA 15A
F90UA 20A
X3 H2
X3 G3 (Not Used)
X3 G2
H6
G6
G5
X3 H5 (Not Used)
L8T
L5P
5292 VT/BU
5290 VT/BU
5291 VT/BU
J138
J140
J139
4
T8B Ignition Coil 2
T8D Ignition Coil 4
T8F Ignition Coil 6
T8H Ignition Coil 8
T8A Ignition Coil 1
T8C Ignition Coil 3
T8E Ignition Coil 5
T8G Ignition Coil 7
X3 44
X2 16 (L8T) X1
X1 2 (L5P) X1 48 (L8T)
1 (L5P) X1
X1 32
K20 Engine Control Module

Power Distribution Schematics (Auxiliary Underhood Fuse Block (L5P) (1 of 2))

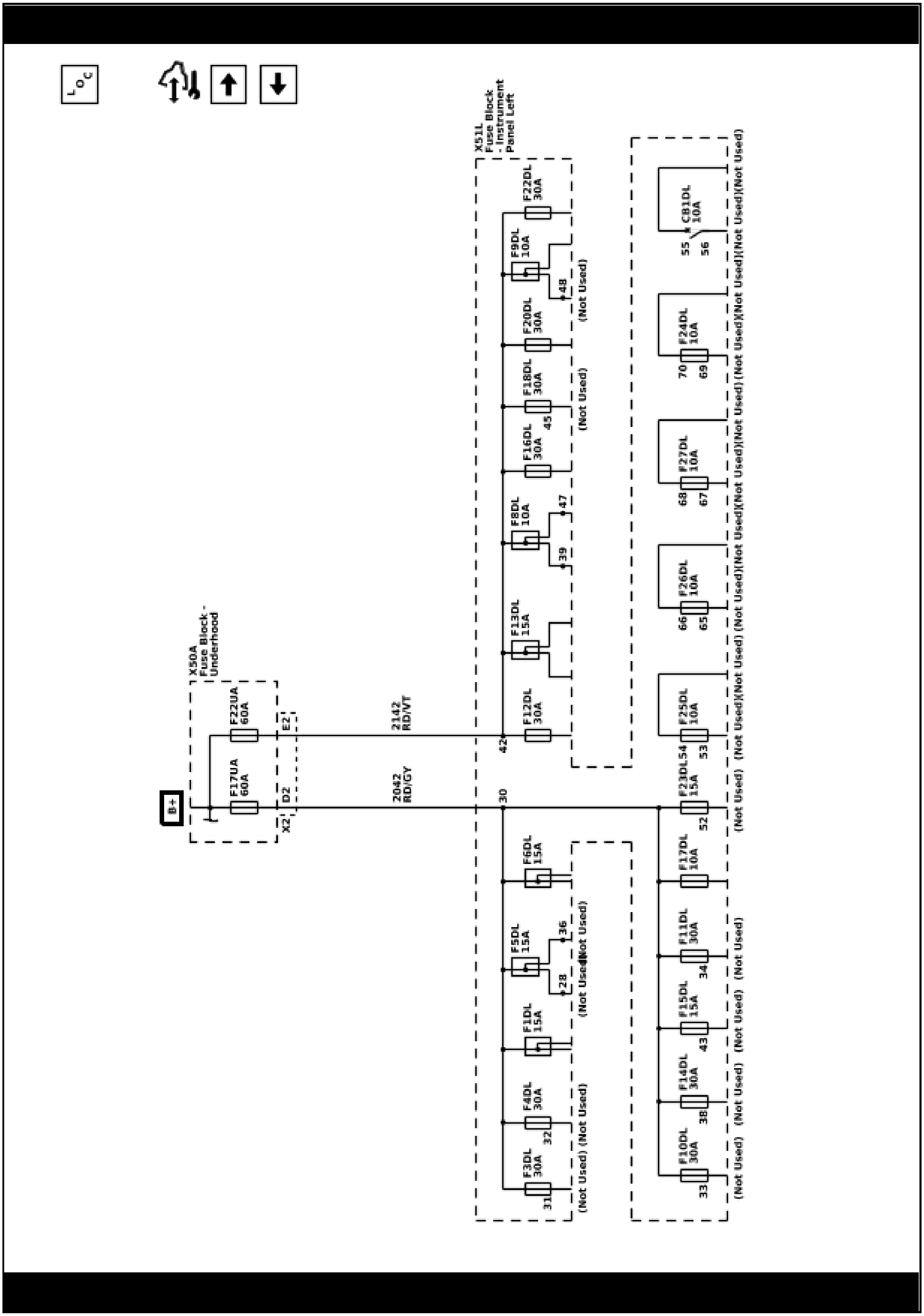

B+
X50A
Fuse Block -
Underhood
KR75
Engine Controls
Ignition Relay
F65UA
60A
F92UA
10A
X3 D1
X3 F7
4040
RD/VT
5267
WH/BK
X50B
Fuse Block -
Underhood
Auxiliary
26
1
KR20F
Cooling
Fan Relay
A90
Logic
B+
F10UB
40A
31
F8UB
25A
33
23
28
F13UB
10A
11
355
VT/GN
2368
WH
3
J177
355
VT/GN
355
VT/GN
7
21
KR22
Fuel
Heater
Relay
K22
Cooling
Fan
Control
Module

5995541

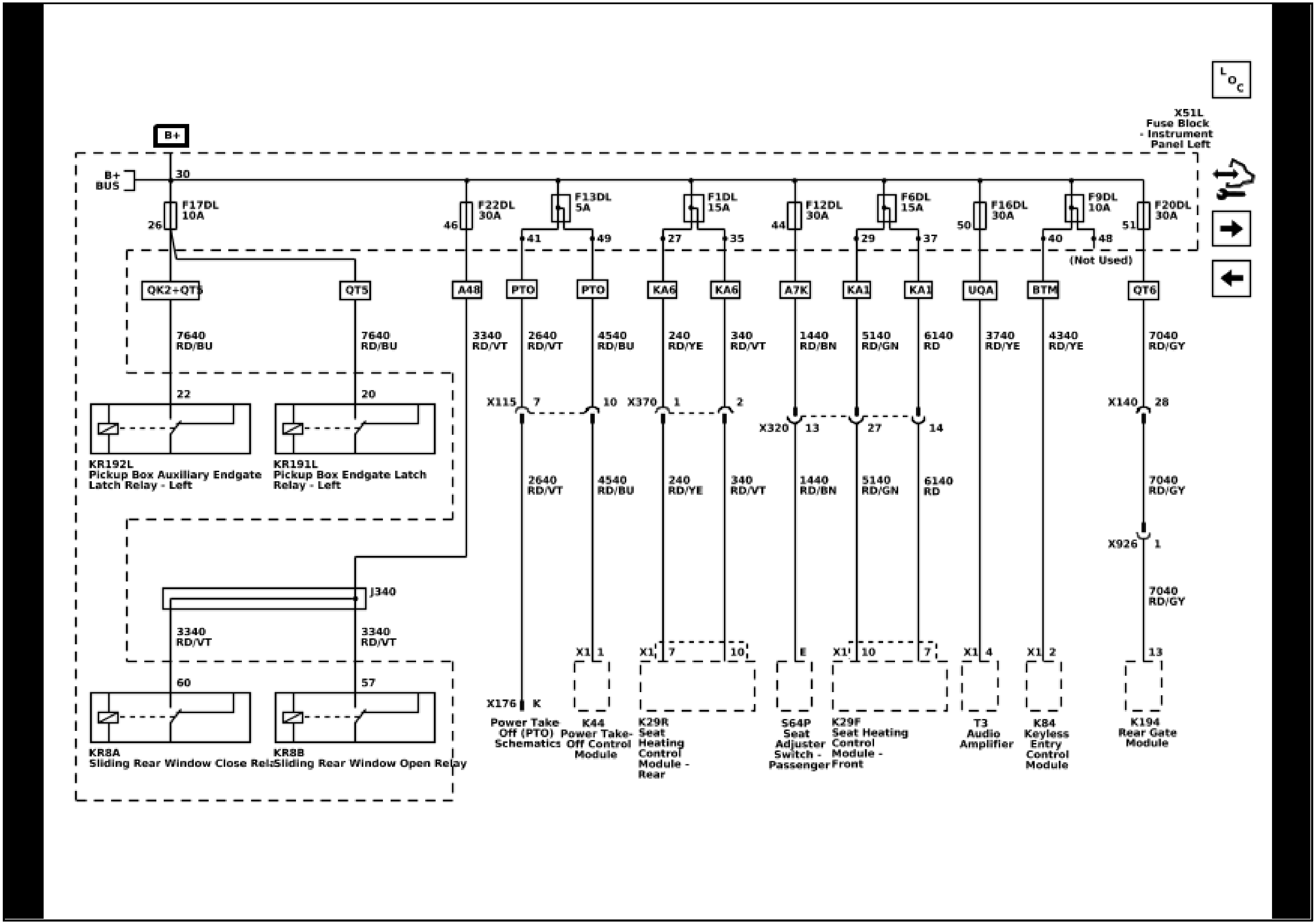
Power Distribution Schematics (Auxiliary Underhood Fuse Block (L5P) (2 of 2))


5995542
X50B
Fuse Block - Underhood Auxiliary
J131
3921
BU
KR121A
Reductant Control Module Relay 1
22
16
9
18
1
F12UB
10A
29
4320
VT/GN
7
X171
J308
X302
14
12V
10(N2N)
16(-N2N)
K111
Fuse Pump Driver Control Module
K115
Reductant Control Module
J133
3674
VT/BU
X116
M103
Turbocharger Vane Position Actuator
B195A
Nitrogen Oxides Sensor 1
J360
4
B136
Exhaust Particulate Matter Sensor
F11UB
20A
25
30
15
J359
B195B
Nitrogen Oxides Sensor 2
9999
GN/GY
24
F9UB
40A
32
KR121B
Reductant Control Module Relay 2
35
RD

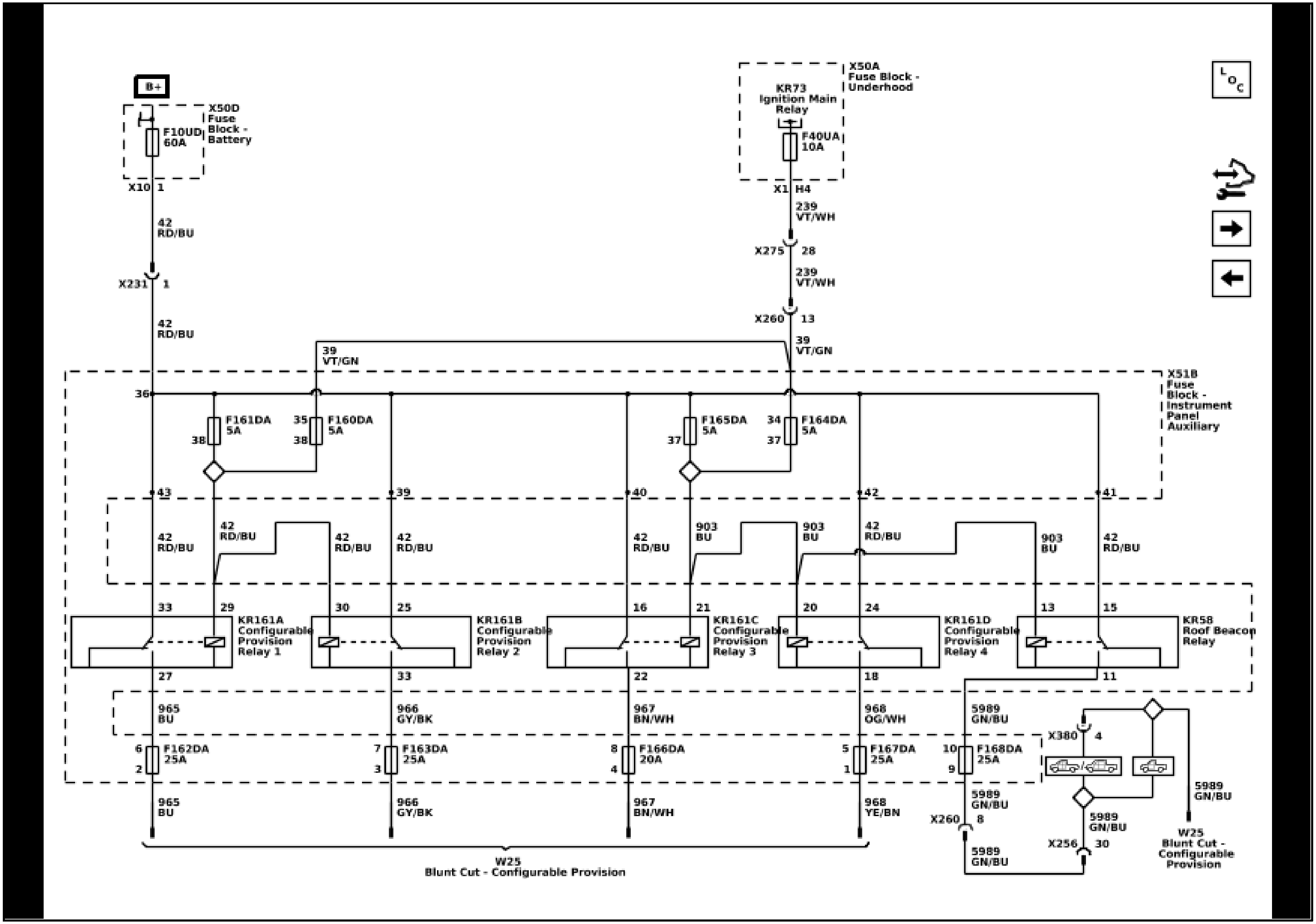
Power Distribution Schematics (Instrument Panel Fuse Block Bussing - Left)


5995543
B+
X50A Fuse Block - Underhood
F17UA 60A
F22UA 60A
X2
D2
E2
2042 RD/GY
2142 RD/VT
X51L Fuse Block - Instrument Panel Left
30
42
F3DL 30A
31
F4DL 30A
32
F1DL 15A
F5DL 15A
28
36
F6DL 15A
F12DL 30A
F13DL 15A
F8DL 10A
39
47
F16DL 30A
F18DL 30A
45
F20DL 30A
F9DL 10A
48
F22DL 30A
F10DL 30A
33
F14DL 30A
38
F15DL 15A
43
F11DL 30A
34
F17DL 10A
52
F23DL 15A
54
53
F25DL 10A
F26DL 10A
66
65
F27DL 10A
68
67
F24DL 10A
70
69
CB1DL 10A
55
56
(Not Used)

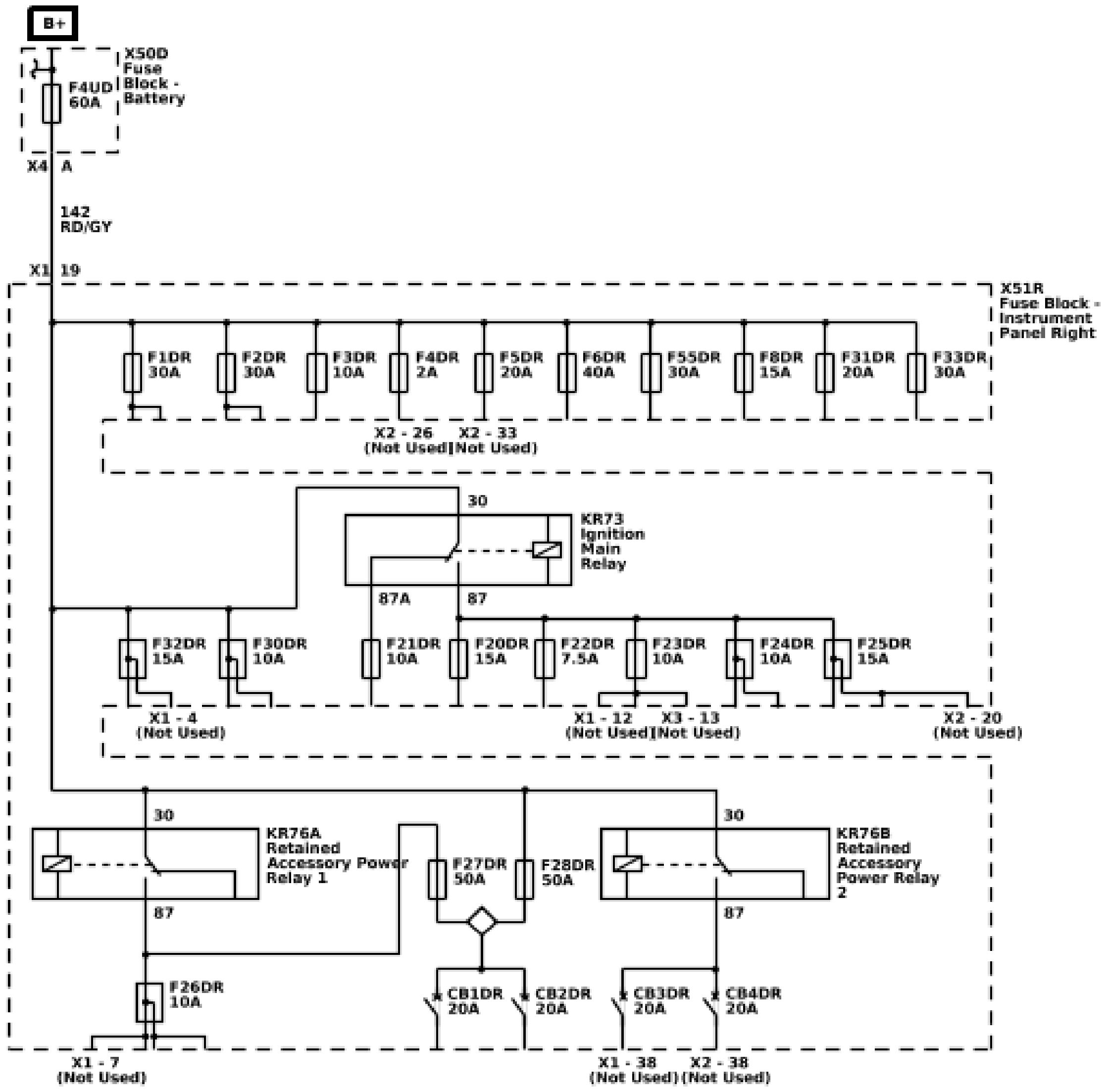
Power Distribution Schematics (F1DL, F8DL, F9DL, F12DL, F16DI, F17DL, F20DL and F22DL Fuses)


B+
B+ BUS
30
X51L Fuse Block - Instrument Panel Left
F17DL 10A
26
F22DL 30A
46
F13DL 5A
41
49
F1DL 15A
27
35
F12DL 30A
44
F6DL 15A
29
37
F16DL 30A
50
F9DL 10A
40
48
(Not Used)
F20DL 30A
51
QK2+QT5
QT5
A48
PTO
PTO
KA6
KA6
A7K
KA1
KA1
UQA
BTM
QT6
7640 RD/BU
7640 RD/BU
3340 RD/VT
2640 RD/VT
4540 RD/BU
240 RD/YE
340 RD/VT
1440 RD/BN
5140 RD/GN
6140 RD
3740 RD/YE
4340 RD/YE
7040 RD/GY
22
20
X115 7
10
X370 1
2
X320 13
27
14
X140 28
KR192L Pickup Box Auxiliary Endgate Latch Relay - Left
KR191L Pickup Box Endgate Latch Relay - Left
2640 RD/VT
4540 RD/BU
240 RD/YE
340 RD/VT
1440 RD/BN
5140 RD/GN
6140 RD
7040 RD/GY
X926 1
7040 RD/GY
J340
3340 RD/VT
3340 RD/VT
60
57
X1 1
X1 7
10
E
X1 10
7
X1 4
X1 2
13
X176 K
Power Take Off (PTO) Schematics
K44 Power Take-Off Control Module
K29R Seat Heating Control Module - Rear
S64P Seat Adjuster Switch - Passenger
K29F Seat Heating Control Module - Front
T3 Audio Amplifier
K84 Keyless Entry Control Module
K194 Rear Gate Module
KR8A Sliding Rear Window Close Relay
KR8B Sliding Rear Window Open Relay
5995544

Power Distribution Schematics (Auxiliary Instrument Panel Fuse Block (9L7))

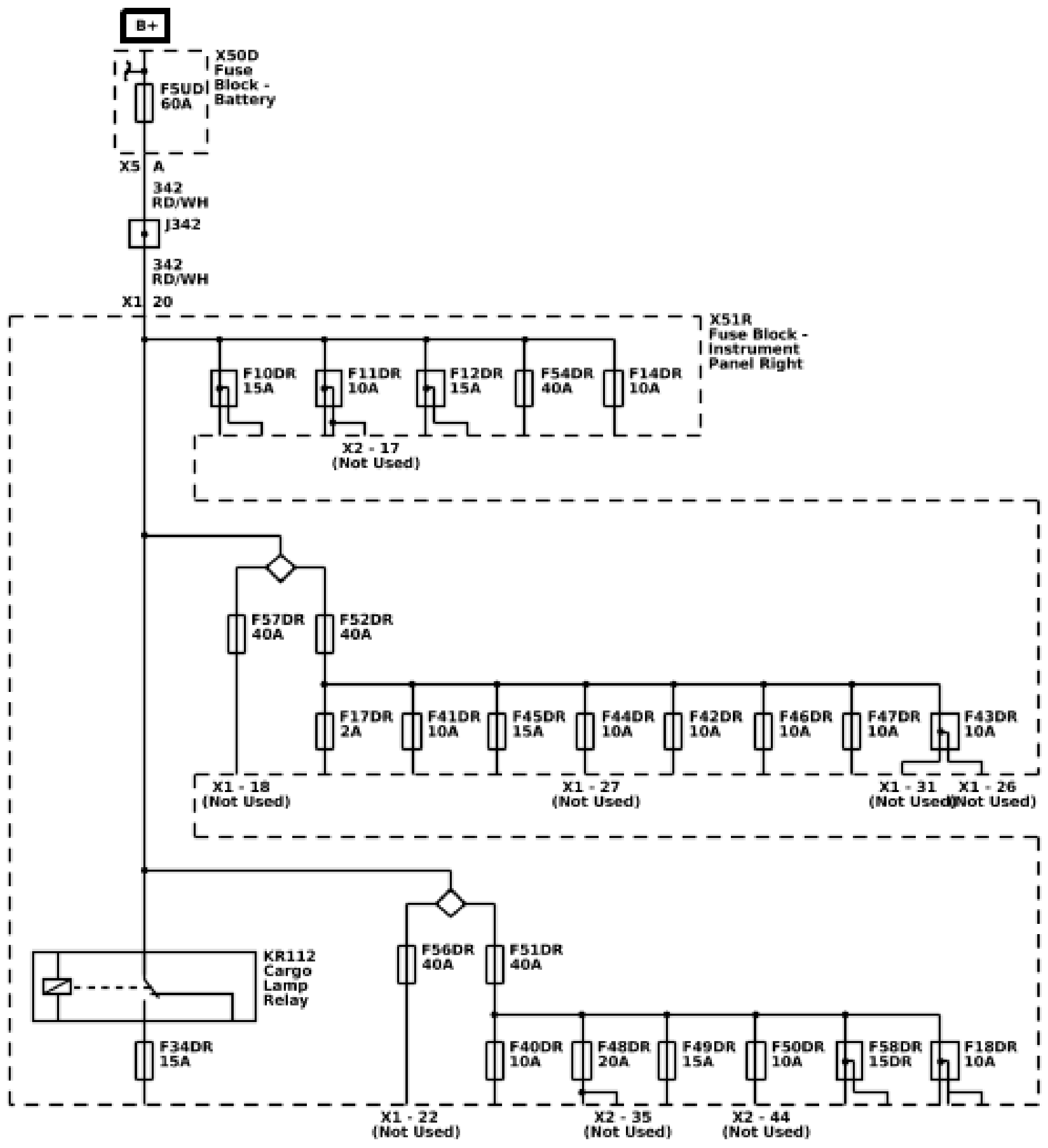

B+
X50D Fuse Block - Battery
F10UD 60A
X10 1
42 RD/BU
X231 1
42 RD/BU
KR73 Ignition Main Relay
X50A Fuse Block - Underhood
F40UA 10A
X1 H4
239 VT/WH
X275 28
239 VT/WH
X260 13
39 VT/GN
39 VT/GN
X51B Fuse Block - Instrument Panel Auxiliary
36
F161DA 5A
38
35
F160DA 5A
38
F165DA 5A
37
34
F164DA 5A
37
43
39
40
42
41
42 RD/BU
42 RD/BU
42 RD/BU
42 RD/BU
42 RD/BU
903 BU
903 BU
42 RD/BU
903 BU
42 RD/BU
33
29
KR161A Configurable Provision Relay 1
30
25
KR161B Configurable Provision Relay 2
16
21
KR161C Configurable Provision Relay 3
20
24
KR161D Configurable Provision Relay 4
13
15
KR58 Roof Beacon Relay
27
33
22
18
11
965 BU
966 GY/BK
967 BN/WH
968 OG/WH
5989 GN/BU
6
F162DA 25A
2
7
F163DA 25A
3
8
F166DA 20A
4
5
F167DA 25A
1
10
F168DA 25A
9
965 BU
966 GY/BK
967 BN/WH
968 YE/BN
5989 GN/BU
X260 8
5989 GN/BU
X380 4
5989 GN/BU
X256 30
5989 GN/BU
W25 Blunt Cut - Configurable Provision
W25 Blunt Cut - Configurable Provision
5995545

Power Distribution Schematics (Instrument Panel Fuse Block Bussing - Right (1 of 2))


B+
X50D
Fuse
Block -
Battery
F4UD
60A
X4 A
142
RD/GY
X1 19
X51R
Fuse Block -
Instrument
Panel Right
F1DR
30A
F2DR
30A
F3DR
10A
F4DR
2A
F5DR
20A
F6DR
40A
F55DR
30A
F8DR
15A
F31DR
20A
F33DR
30A
X2 - 26
(Not Used)
X2 - 33
(Not Used)
30
KR73
Ignition
Main
Relay
87A
87
F32DR
15A
F30DR
10A
F21DR
10A
F20DR
15A
F22DR
7.5A
F23DR
10A
F24DR
10A
F25DR
15A
X1 - 4
(Not Used)
X1 - 12
(Not Used)
X3 - 13
(Not Used)
X2 - 20
(Not Used)
30
KR76A
Retained
Accessory Power
Relay 1
87
F27DR
50A
F28DR
50A
30
KR76B
Retained
Accessory
Power Relay
2
87
F26DR
10A
CB1DR
20A
CB2DR
20A
CB3DR
20A
CB4DR
20A
X1 - 7
(Not Used)
X1 - 38
(Not Used)
X2 - 38
(Not Used)

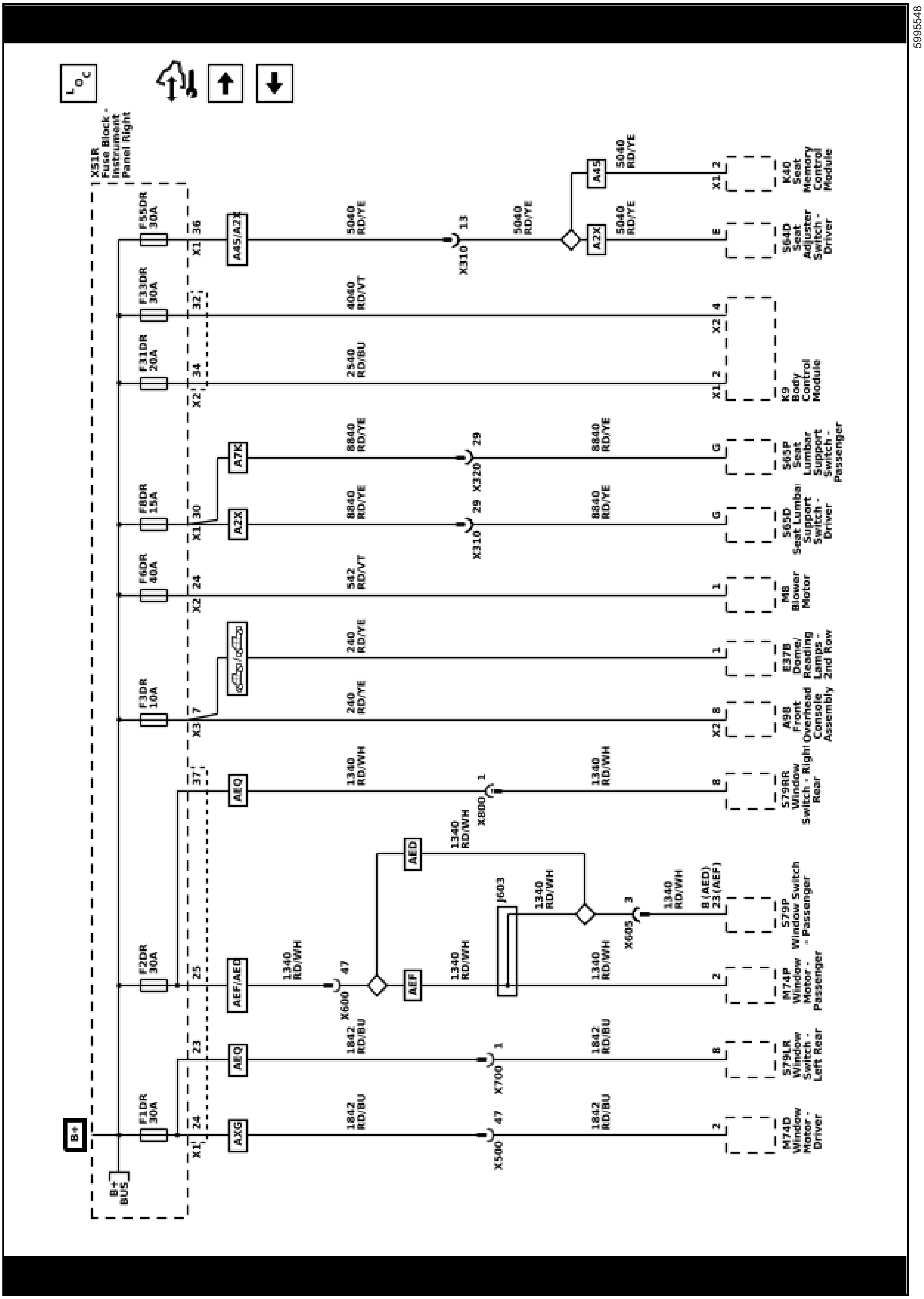
5995546

Power Distribution Schematics (Instrument Panel Fuse Block Bussing - Right (2 of 2))

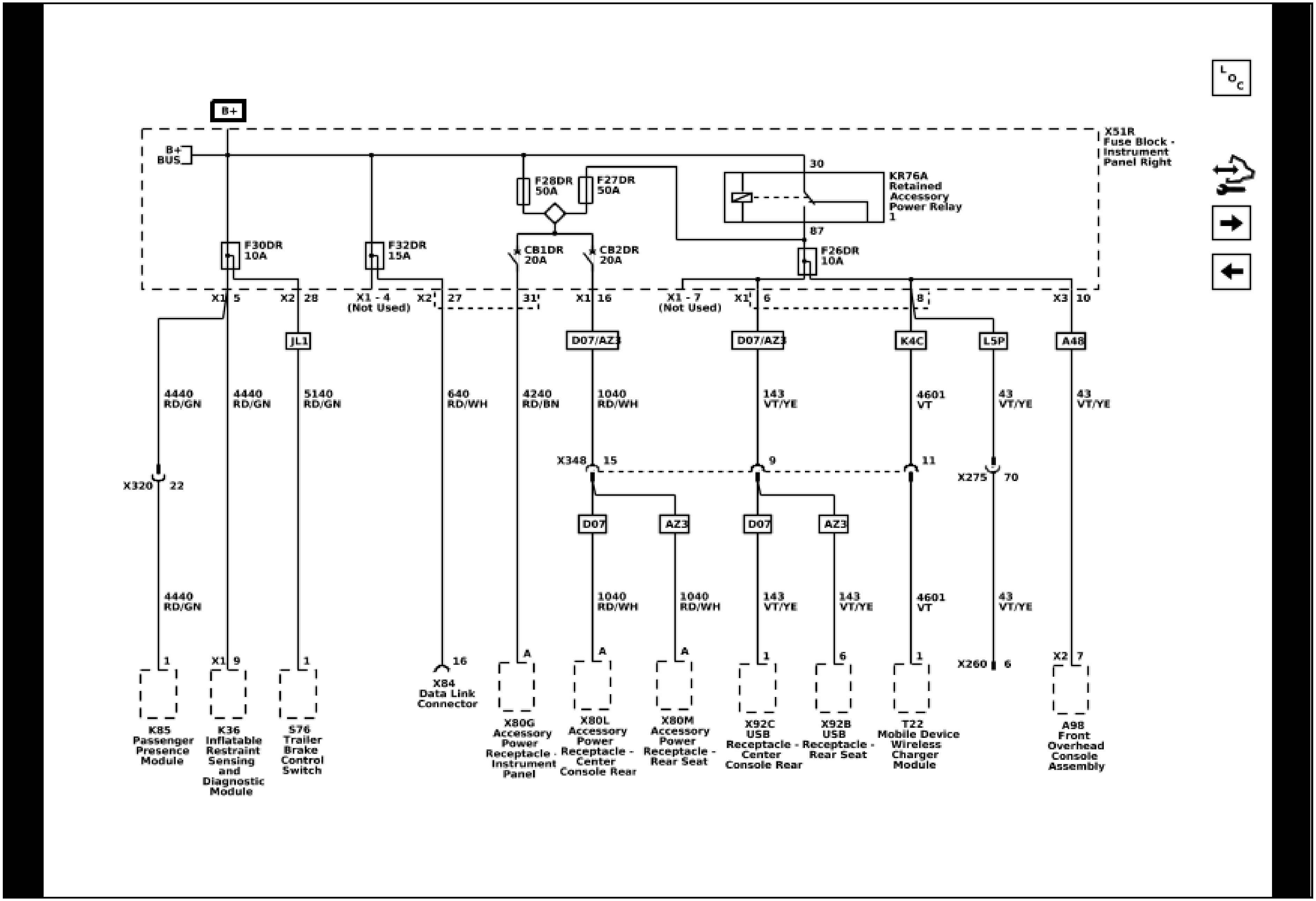

B+
X50D
Fuse
Block -
Battery
F5UD
60A
X5 A
342
RD/WH
J342
342
RD/WH
X1 20
X51R
Fuse Block -
Instrument
Panel Right
F10DR
15A
F11DR
10A
F12DR
15A
F54DR
40A
F14DR
10A
X2 - 17
(Not Used)
F57DR
40A
F52DR
40A
F17DR
2A
F41DR
10A
F45DR
15A
F44DR
10A
F42DR
10A
F46DR
10A
F47DR
10A
F43DR
10A
X1 - 18
(Not Used)
X1 - 27
(Not Used)
X1 - 31
(Not Used)
X1 - 26
(Not Used)
KR112
Cargo
Lamp
Relay
F34DR
15A
F56DR
40A
F51DR
40A
F40DR
10A
F48DR
20A
F49DR
15A
F50DR
10A
F58DR
15DR
F18DR
10A
X1 - 22
(Not Used)
X2 - 35
(Not Used)
X2 - 44
(Not Used)

5995547

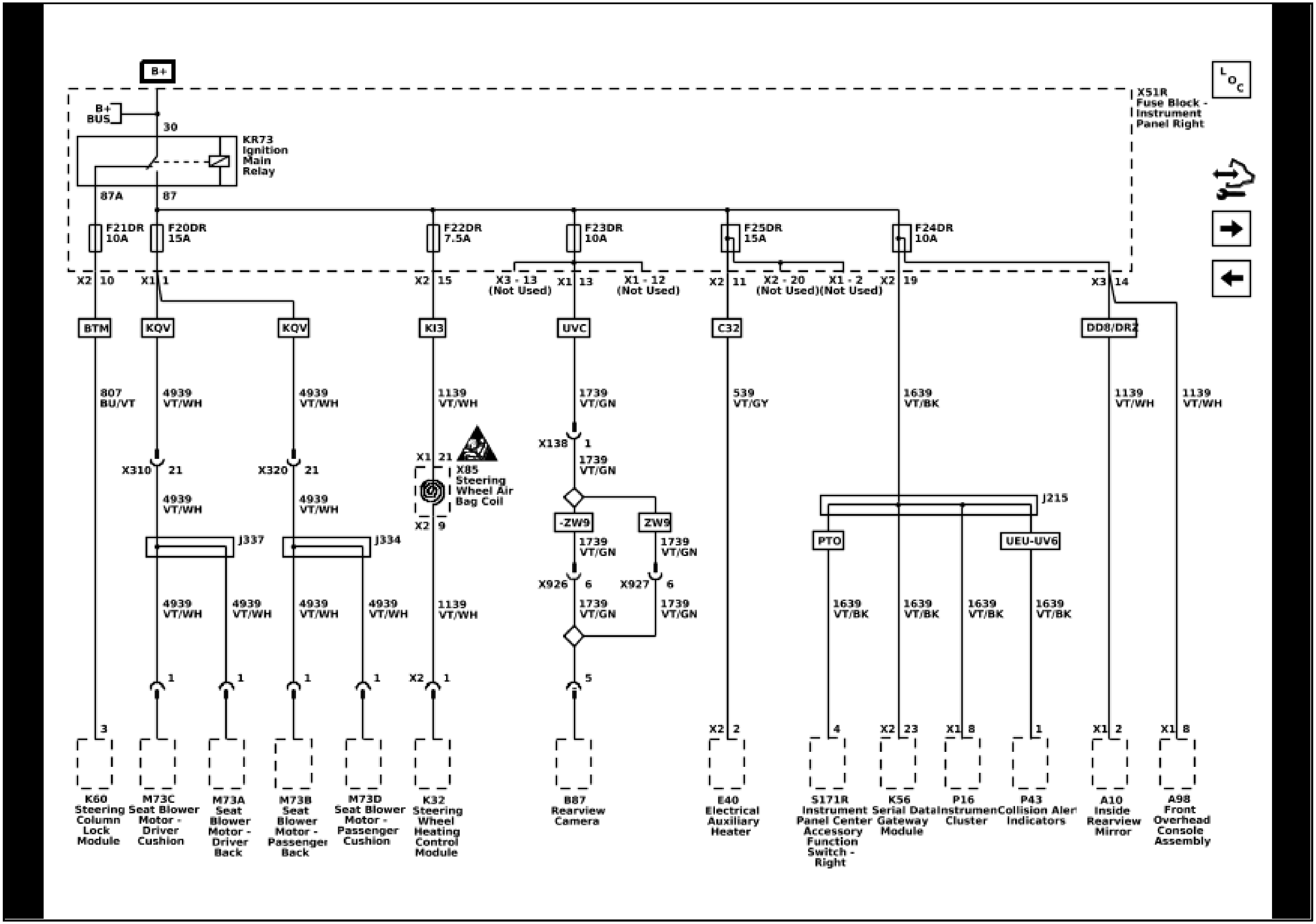
Power Distribution Schematics (F1DR, F2DR, F3DR, F6DR, F8DR, F31DR, F33DR, and F55DR Fuses)


5995548
X51R Fuse Block - Instrument Panel Right
B+
B+ BUS
F1DR 30A
F2DR 30A
F3DR 10A
F6DR 40A
F8DR 15A
F31DR 20A
F33DR 30A
F55DR 30A
X1 24
23
25
37
X3 7
X2 24
X1 30
X2 34
32
X1 36
AXG
AEQ
AEF/AED
AEQ
AED
AEF
A7K
A2X
A45/A2X
A45
A2X
1842 RD/BU
1340 RD/WH
240 RD/YE
542 RD/VT
8840 RD/YE
2540 RD/BU
4040 RD/VT
5040 RD/YE
X500 47
X700 1
X600 47
X800 1
X605 3
J603
X310 29
X320 29
X310 13
2
8
2
8 (AED) 23 (AEF)
8
X2 8
1
1
G
G
X1 2
X2 4
E
X1 2
M74D Window Motor - Driver
S79LR Window Switch - Left Rear
M74P Window Motor - Passenger
S79P Window Switch - Passenger
S79RR Window Switch - Right Rear
A98 Front Overhead Console Assembly
E37B Dome/ Reading Lamps - 2nd Row
M8 Blower Motor
S65D Seat Lumbar Support Switch - Driver
S65P Seat Lumbar Support Switch - Passenger
K9 Body Control Module
S64D Seat Adjuster Switch - Driver
K40 Seat Memory Control Module

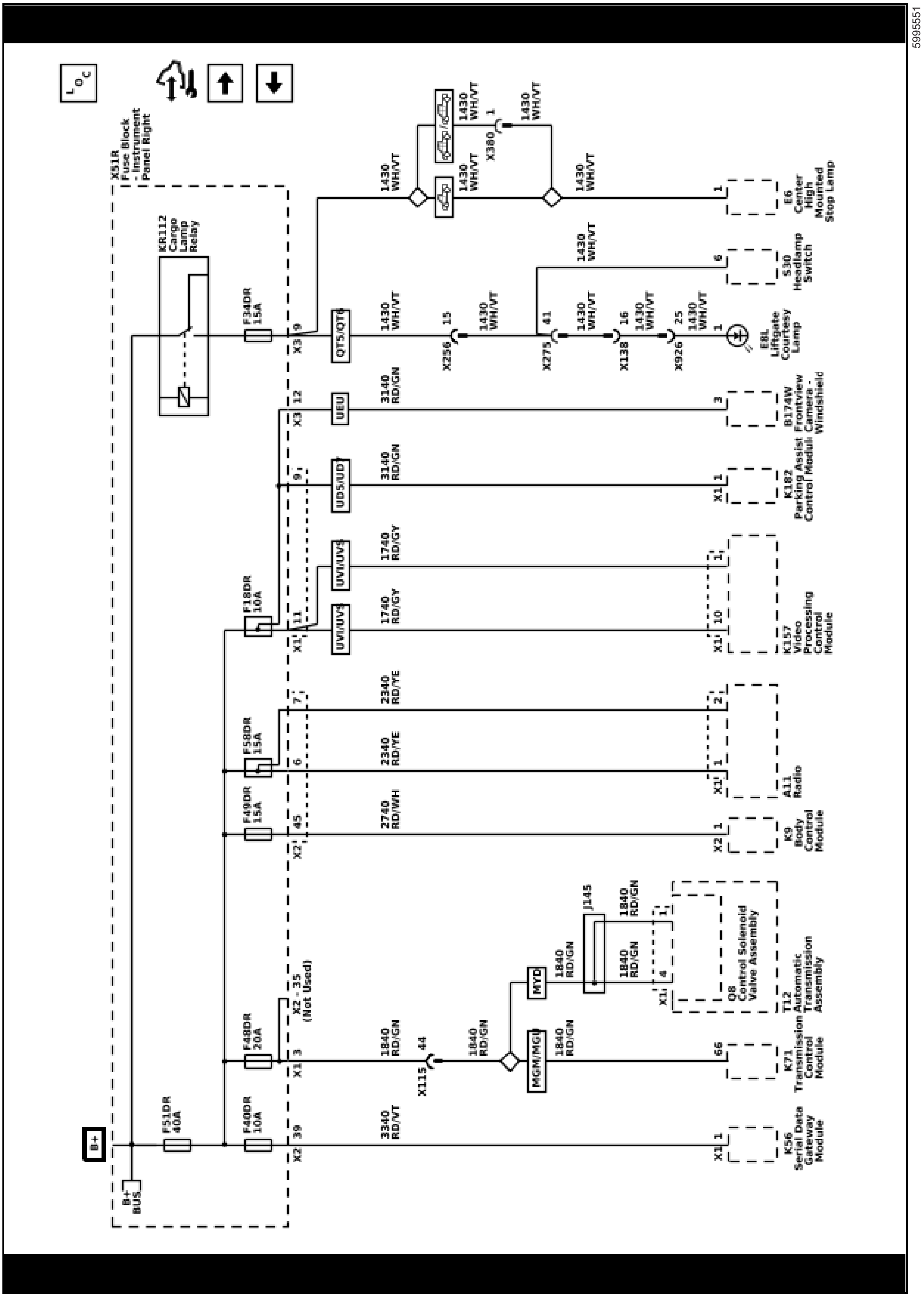
Power Distribution Schematics (CB1DR and CB2DR Circuit Breakers, F26DR, F27DR, F28DR, F30DR, and F32DR Fuses)


B+
B+ BUS
X51R Fuse Block - Instrument Panel Right
F28DR 50A
F27DR 50A
30
KR76A Retained Accessory Power Relay 1
87
F30DR 10A
F32DR 15A
CB1DR 20A
CB2DR 20A
F26DR 10A
X1 5
X2 28
X1 - 4 (Not Used)
X2 27
31
X1 16
X1 - 7 (Not Used)
X1 6
8
X3 10
JL1
D07/AZ3
D07/AZ3
K4C
L5P
A48
4440 RD/GN
4440 RD/GN
5140 RD/GN
640 RD/WH
4240 RD/BN
1040 RD/WH
143 VT/YE
4601 VT
43 VT/YE
43 VT/YE
X348 15
9
11
X275 70
X320 22
D07
AZ3
D07
AZ3
4440 RD/GN
1040 RD/WH
1040 RD/WH
143 VT/YE
143 VT/YE
4601 VT
43 VT/YE
1
X1 9
1
16
A
A
A
1
6
1
X260 6
X2 7
K85 Passenger Presence Module
K36 Inflatable Restraint Sensing and Diagnostic Module
S76 Trailer Brake Control Switch
X84 Data Link Connector
X80G Accessory Power Receptacle - Instrument Panel
X80L Accessory Power Receptacle - Center Console Rear
X80M Accessory Power Receptacle - Rear Seat
X92C USB Receptacle - Center Console Rear
X92B USB Receptacle - Rear Seat
T22 Mobile Device Wireless Charger Module
A98 Front Overhead Console Assembly
5995549

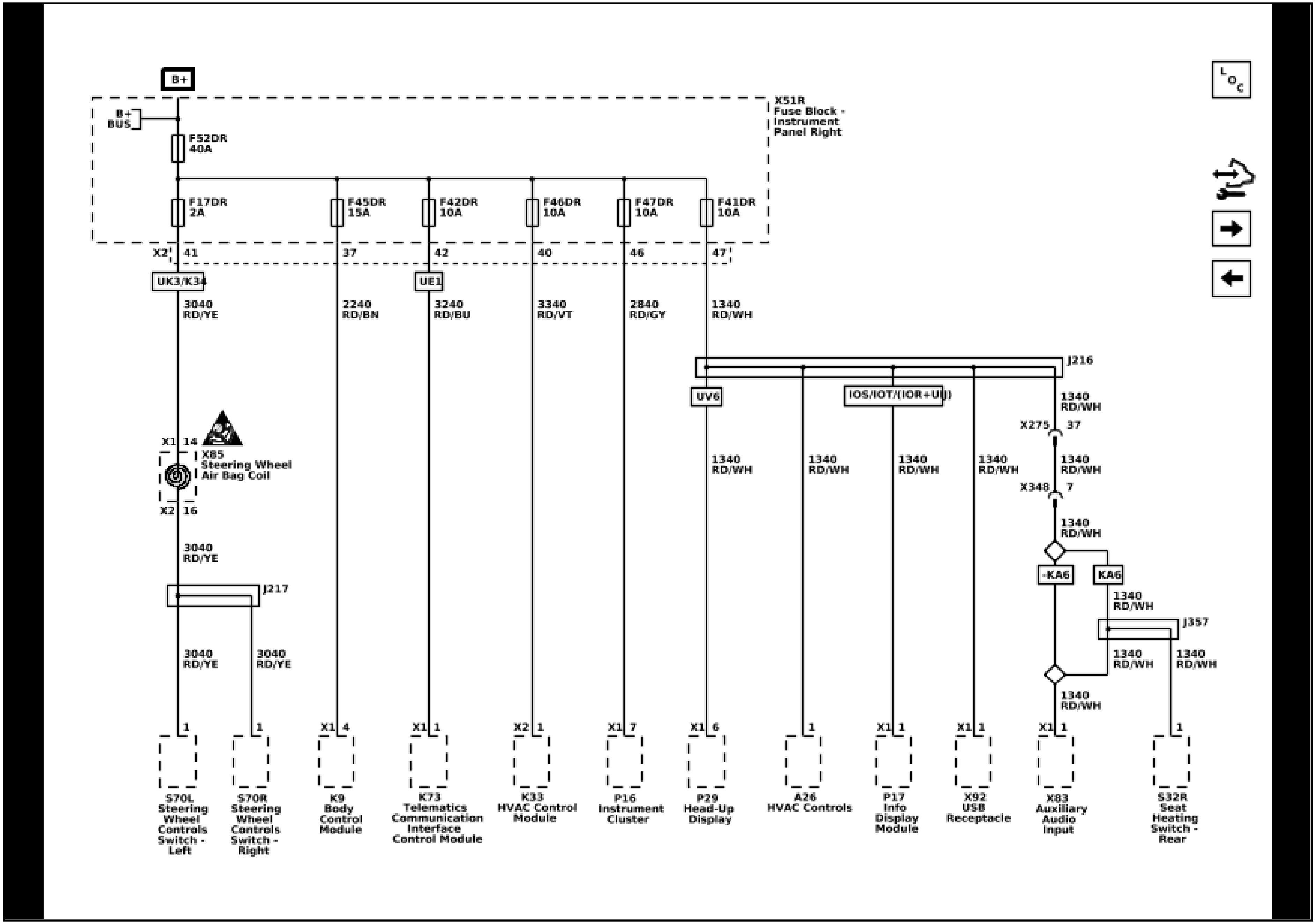
Power Distribution Schematics (F20DR, F21DR, F22DR, F23DR, F23DR, F24DR and F25DR Fuses)


B+
B+ BUS
30
KR73 Ignition Main Relay
87A
87
X51R Fuse Block - Instrument Panel Right
F21DR 10A
F20DR 15A
F22DR 7.5A
F23DR 10A
F25DR 15A
F24DR 10A
X2 10
X1 1
X2 15
X3 - 13 (Not Used)
X1 13
X1 - 12 (Not Used)
X2 11
X2 - 20 (Not Used)
X1 - 2 (Not Used)
X2 19
X3 14
BTM
KQV
KQV
KI3
UVC
C32
DD8/DR2
807 BU/VT
4939 VT/WH
1139 VT/WH
1739 VT/GN
539 VT/GY
1639 VT/BK
1139 VT/WH
X310 21
X320 21
X1 21
X85 Steering Wheel Air Bag Coil
X2 9
X138 1
J337
J334
-ZW9
ZW9
X926 6
X927 6
J215
PTO
UEU-UV6
1
X2 1
5
3
X2 2
4
X2 23
X1 8
X1 2
X1 8
K60 Steering Column Lock Module
M73C Seat Blower Motor - Driver Cushion
M73A Seat Blower Motor - Driver Back
M73B Seat Blower Motor - Passenger Back
M73D Seat Blower Motor - Passenger Cushion
K32 Steering Wheel Heating Control Module
B87 Rearview Camera
E40 Electrical Auxiliary Heater
S171R Instrument Panel Center Accessory Function Switch - Right
K56 Serial Data Gateway Module
P16 Instrument Cluster
P43 Collision Alert Indicators
A10 Inside Rearview Mirror
A98 Front Overhead Console Assembly
L O C
5995550

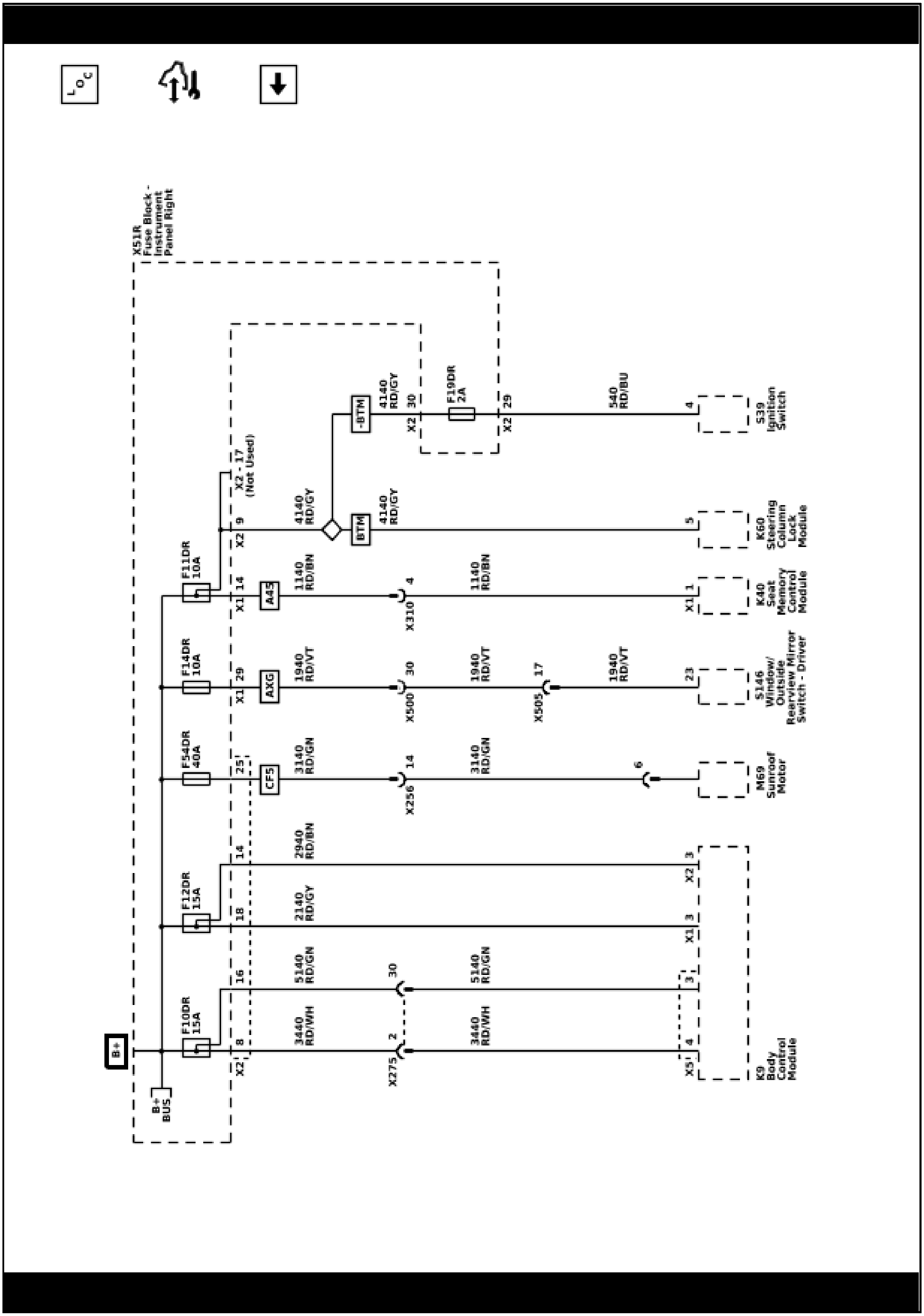
Power Distribution Schematics (F18DR, F34DR, F40DR, F48DR, F49DR, F51DR and F58DR Fuses)


5995551
L O C
B+
B+ BUS
X51R Fuse Block - Instrument Panel Right
KR112 Cargo Lamp Relay
F51DR 40A
F40DR 10A
F48DR 20A
F49DR 15A
F58DR 15A
F18DR 10A
F34DR 15A
X2 39
X1 3
X2 - 35 (Not Used)
X2 45
6
7
X1 11
9
X3 12
X3 9
3340 RD/VT
1840 RD/GN
X115 44
MGM/MGU
MYD
J145
2740 RD/WH
2340 RD/YE
1740 RD/GY
UVI/UVS
3140 RD/GN
UD5/UD7
UEU
QT5/QT6
1430 WH/VT
X256 15
X275 41
X138 16
X926 25
X380 1
X1 1
66
X1 4
1
X2 1
X1 1
2
X1 10
1
X1 1
3
1
6
1
K56 Serial Data Gateway Module
K71 Transmission Control Module
T12 Automatic Transmission Assembly
Q8 Control Solenoid Valve Assembly
K9 Body Control Module
A11 Radio
K157 Video Processing Control Module
K182 Parking Assist Control Module
B174W Frontview Camera - Windshield
E8L Liftgate Courtesy Lamp
S30 Headlamp Switch
E6 Center High Mounted Stop Lamp

Power Distribution Schematics (F17DR, F41DR, F42DR, F45DR, F46DR, F47DR and F52DR Fuses)

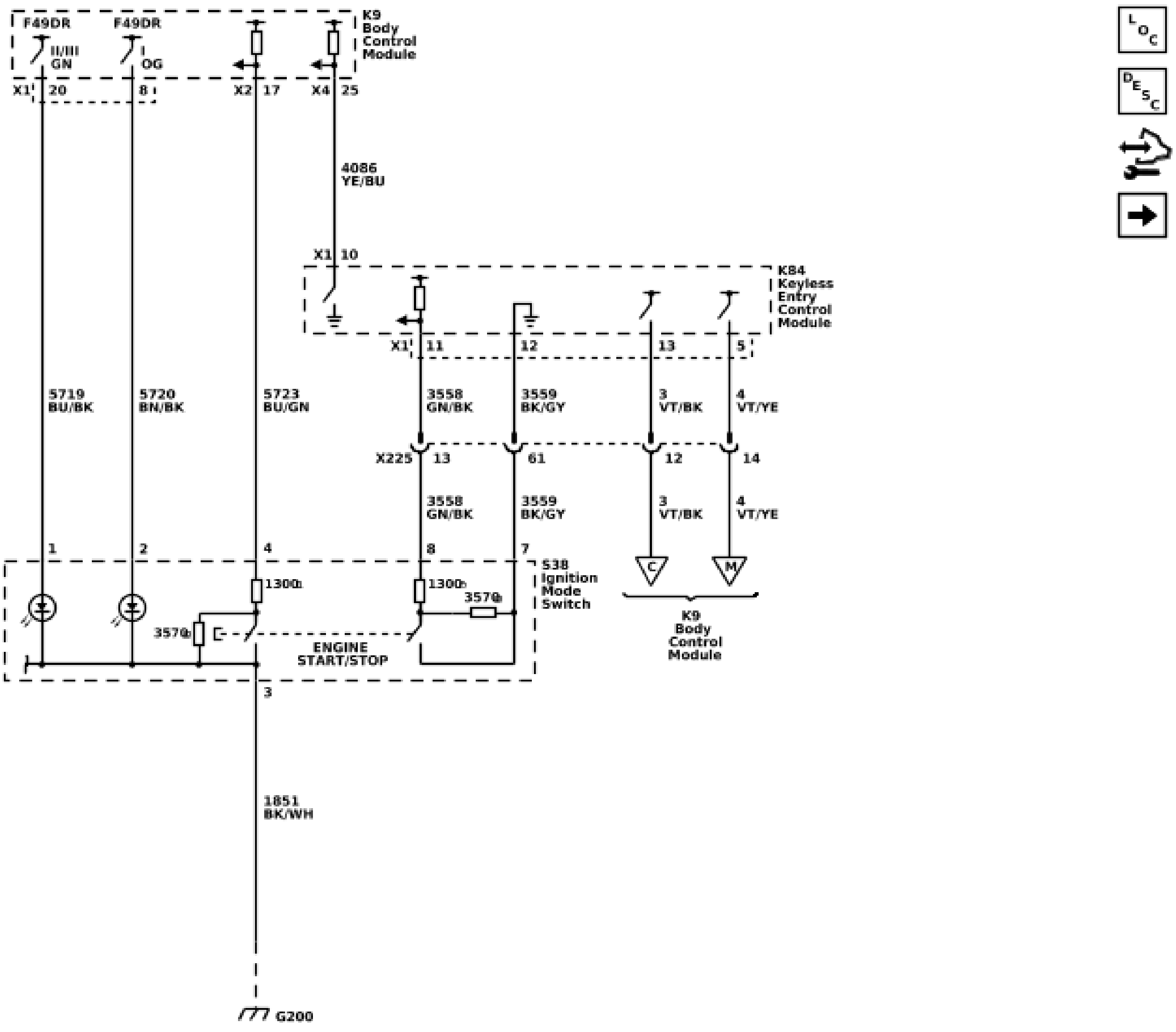

B+
B+ BUS
X51R Fuse Block - Instrument Panel Right
F52DR 40A
F17DR 2A
F45DR 15A
F42DR 10A
F46DR 10A
F47DR 10A
F41DR 10A
X2 41
37
42
40
46
47
UK3/K34
UE1
3040 RD/YE
2240 RD/BN
3240 RD/BU
3340 RD/VT
2840 RD/GY
1340 RD/WH
J216
UV6
IOS/IOT/(IOR+UJ)
X275 37
X348 7
-KA6
KA6
J357
X1 14
X85 Steering Wheel Air Bag Coil
X2 16
J217
S70L Steering Wheel Controls Switch - Left
S70R Steering Wheel Controls Switch - Right
K9 Body Control Module
K73 Telematics Communication Interface Control Module
K33 HVAC Control Module
P16 Instrument Cluster
P29 Head-Up Display
A26 HVAC Controls
P17 Info Display Module
X92 USB Receptacle
X83 Auxiliary Audio Input
S32R Seat Heating Switch - Rear
X1 4
X1 1
X2 1
X1 7
X1 6
1
5995552

Power Distribution Schematics (F10DR, F11DR, F12DR, F14DR, F19DR and F54DR Fuses)


X51R Fuse Block - Instrument Panel Right
B+
B+ BUS
F10DR 15A
F12DR 15A
F54DR 40A
F14DR 10A
F11DR 10A
F19DR 2A
X2 8
16
18
14
25
CF5
X1 29
AXG
X1 14
A45
X2 9
X2 - 17 (Not Used)
BTM
-BTM
X2 30
X2 29
3440 RD/WH
5140 RD/GN
2140 RD/GY
2940 RD/BN
3140 RD/GN
1940 RD/VT
1140 RD/BN
4140 RD/GY
540 RD/BU
X275 2
30
X256 14
X500 30
X310 4
X505 17
6
X5 4
3
X1 3
X2 3
K9 Body Control Module
M69 Sunroof Motor
23
S146 Window/ Outside Rearview Mirror Switch - Driver
X1 1
K40 Seat Memory Control Module
5
K60 Steering Column Lock Module
4
S39 Ignition Switch

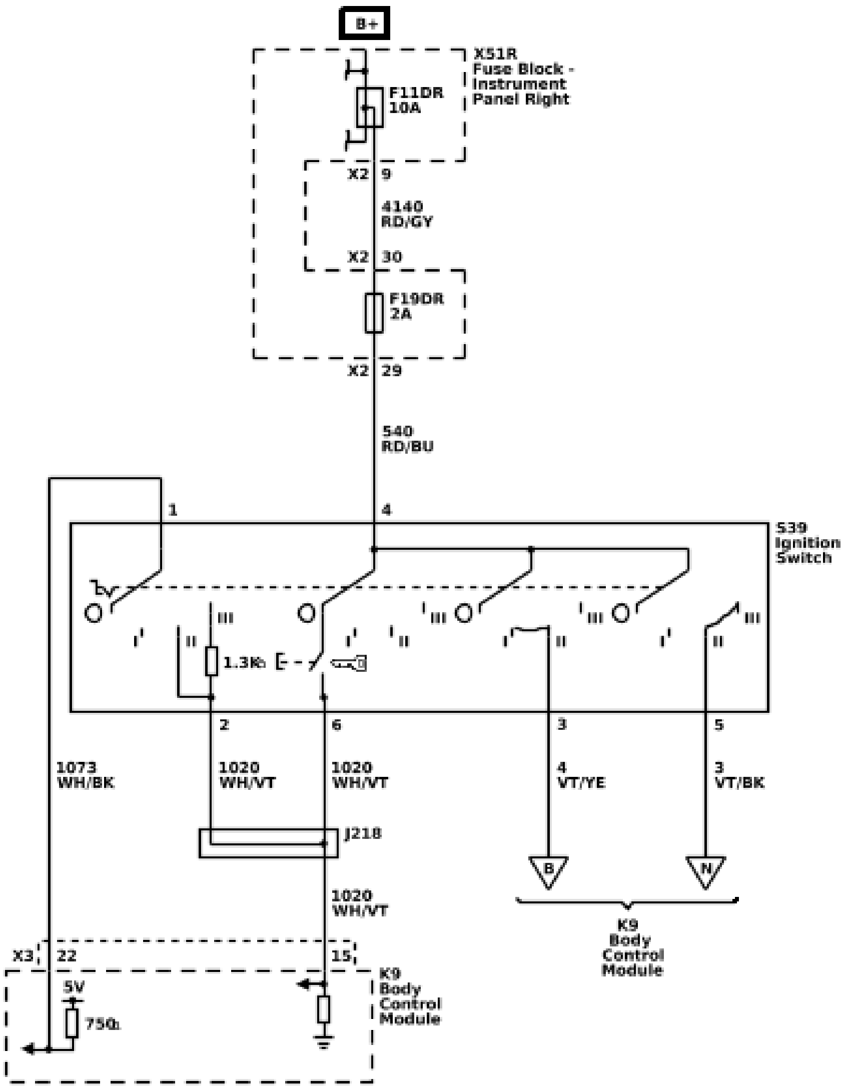
5995553

Power Moding Schematics (Ignition Mode Switch (BTM))


K9
Body
Control
Module
F49DR
II/III
GN
F49DR
I
OG
X1 20
8
X2 17
X4 25
4086
YE/BU
X1 10
K84
Keyless
Entry
Control
Module
X1 11
12
13
5
5719
BU/BK
5720
BN/BK
5723
BU/GN
3558
GN/BK
3559
BK/GY
3
VT/BK
4
VT/YE
X225 13
61
12
14
3558
GN/BK
3559
BK/GY
3
VT/BK
4
VT/YE
1
2
4
8
7
S38
Ignition
Mode
Switch
1300Ω
1300Ω
3570Ω
3570Ω
ENGINE
START/STOP
C
M
K9
Body
Control
Module
3
1851
BK/WH
G200

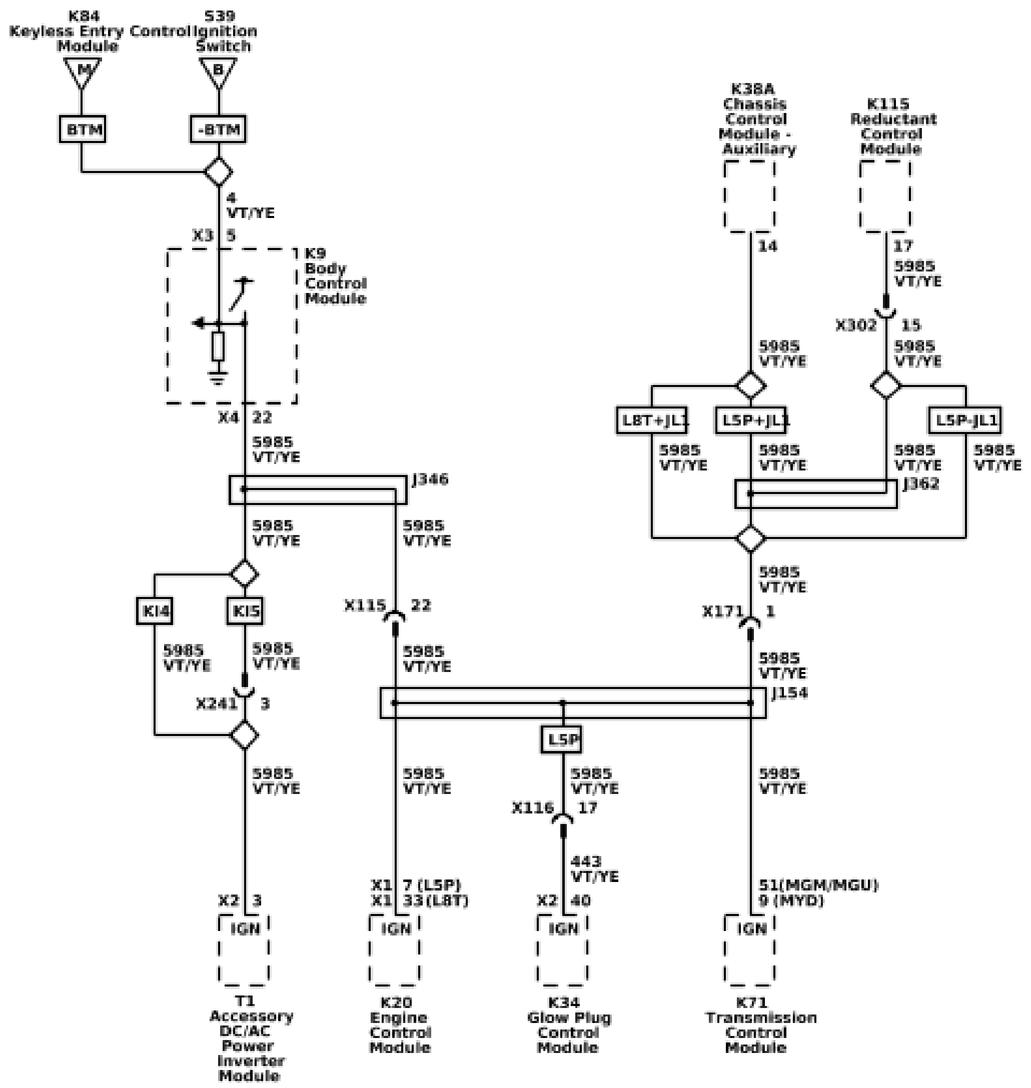
5995554

Power Moding Schematics (Ignition switch (-BTM))


B+
X51R
Fuse Block -
Instrument
Panel Right
F11DR
10A
X2 9
4140
RD/GY
X2 30
F19DR
2A
X2 29
540
RD/BU
1
4
S39
Ignition
Switch
III
II
I
1.3K
2
6
3
5
1073
WH/BK
1020
WH/VT
1020
WH/VT
4
VT/YE
3
VT/BK
J218
1020
WH/VT
B
N
K9
Body
Control
Module
X3
22
15
K9
Body
Control
Module
5V
750

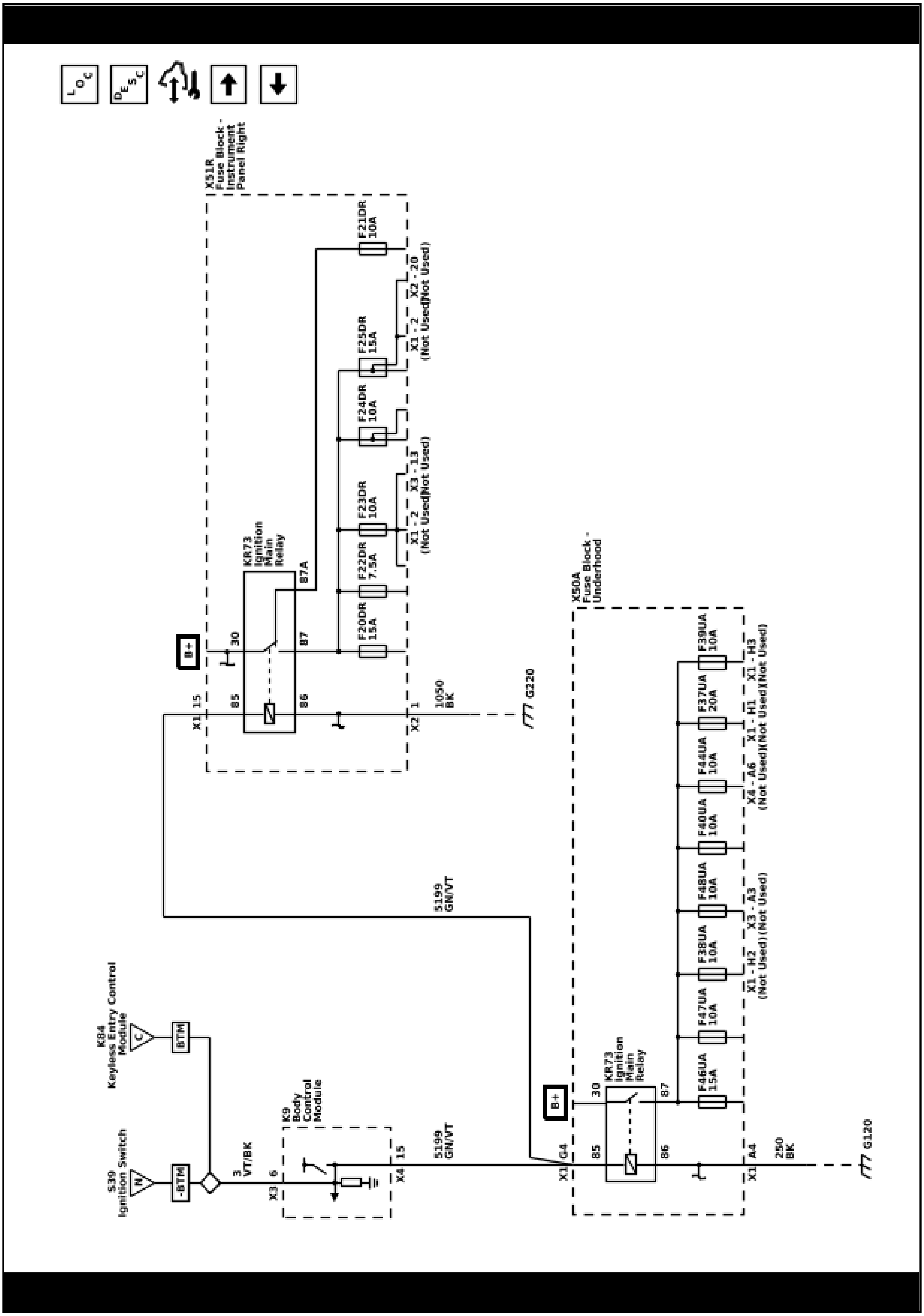
5995555

Power Moding Schematics (Accessory Wakeup)

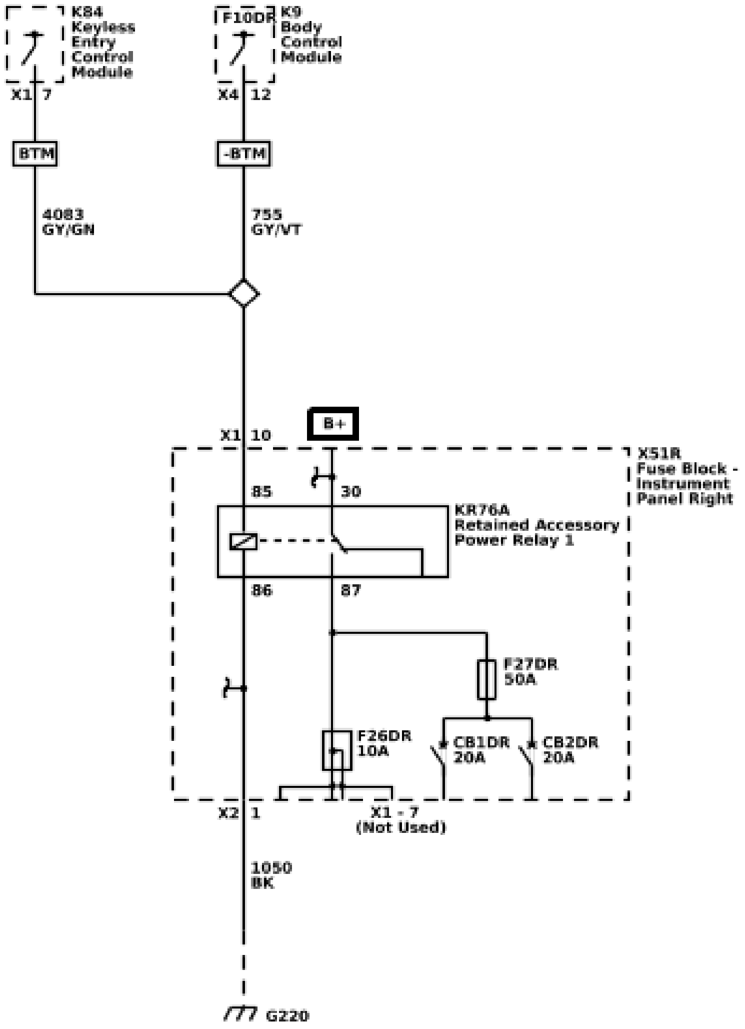

K84
Keyless Entry Control Module
S39
Ignition Switch
M
B
BTM
-BTM
4
VT/YE
X3 5
K9
Body
Control
Module
X4 22
5985
VT/YE
J346
KI4
KI5
X241 3
X115 22
X171 1
J154
L5P
X116 17
443
VT/YE
K38A
Chassis
Control
Module -
Auxiliary
14
K115
Reductant
Control
Module
17
X302 15
L8T+JL1
L5P+JL1
L5P-JL1
J362
X2 3
X1 7 (L5P)
X1 33 (L8T)
X2 40
51(MGM/MGU)
9 (MYD)
IGN
T1
Accessory
DC/AC
Power
Inverter
Module
K20
Engine
Control
Module
K34
Glow Plug
Control
Module
K71
Transmission
Control
Module

5995556

Power Moding Schematics (Ignition Main Relay)

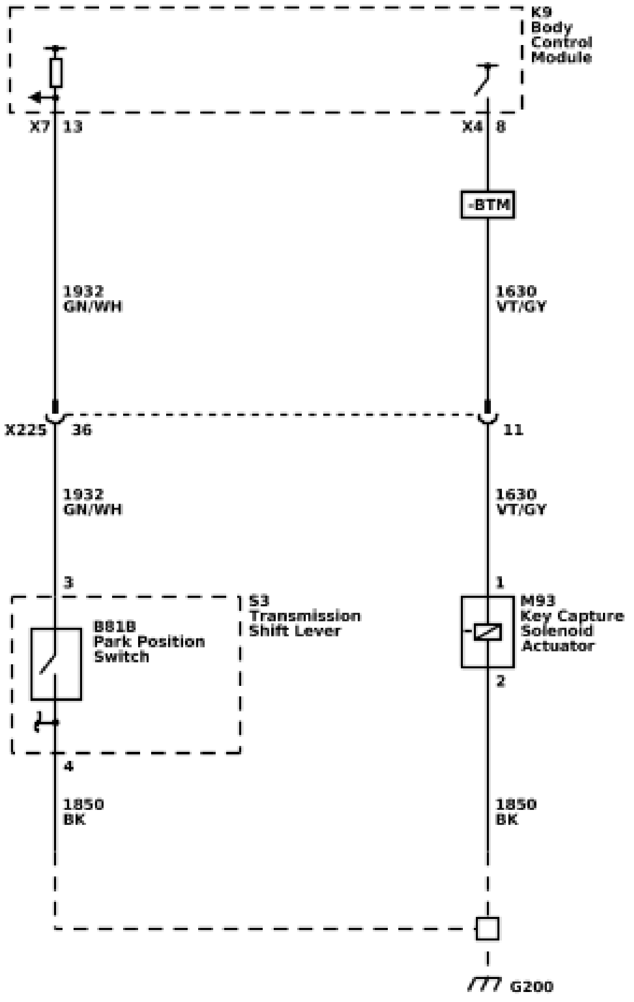

5995557
X51R Fuse Block - Instrument Panel Right
B+
KR73 Ignition Main Relay
30
85
86
87
87A
X1 15
X2 1
1050 BK
G220
F20DR 15A
F22DR 7.5A
F23DR 10A
F24DR 10A
F25DR 15A
F21DR 10A
X1 - 2 (Not Used)
X3 - 13 (Not Used)
X1 - 2 (Not Used)
X2 - 20 (Not Used)
S39 Ignition Switch
K84 Keyless Entry Control Module
N
C
-BTM
BTM
K9 Body Control Module
3 VT/BK
X3 6
X4 15
5199 GN/VT
5199 GN/VT
X50A Fuse Block - Underhood
X1 G4
X1 A4
250 BK
G120
F46UA 15A
F47UA 10A
F38UA 10A
F48UA 10A
F40UA 10A
F44UA 10A
F37UA 20A
F39UA 10A
X1 - H2 (Not Used)
X3 - A3 (Not Used)
X4 - A6 (Not Used)
X1 - H1 (Not Used)
X1 - H3 (Not Used)

Power Moding Schematics (Retained Accessory Power Relays)


K84
Keyless
Entry
Control
Module
X1 7
BTM
4083
GY/GN
F10DR
K9
Body
Control
Module
X4 12
-BTM
755
GY/VT
B+
X1 10
X51R
Fuse Block -
Instrument
Panel Right
85
30
KR76A
Retained Accessory
Power Relay 1
86
87
F27DR
50A
F26DR
10A
CB1DR
20A
CB2DR
20A
X2 1
X1 - 7
(Not Used)
1050
BK
G220

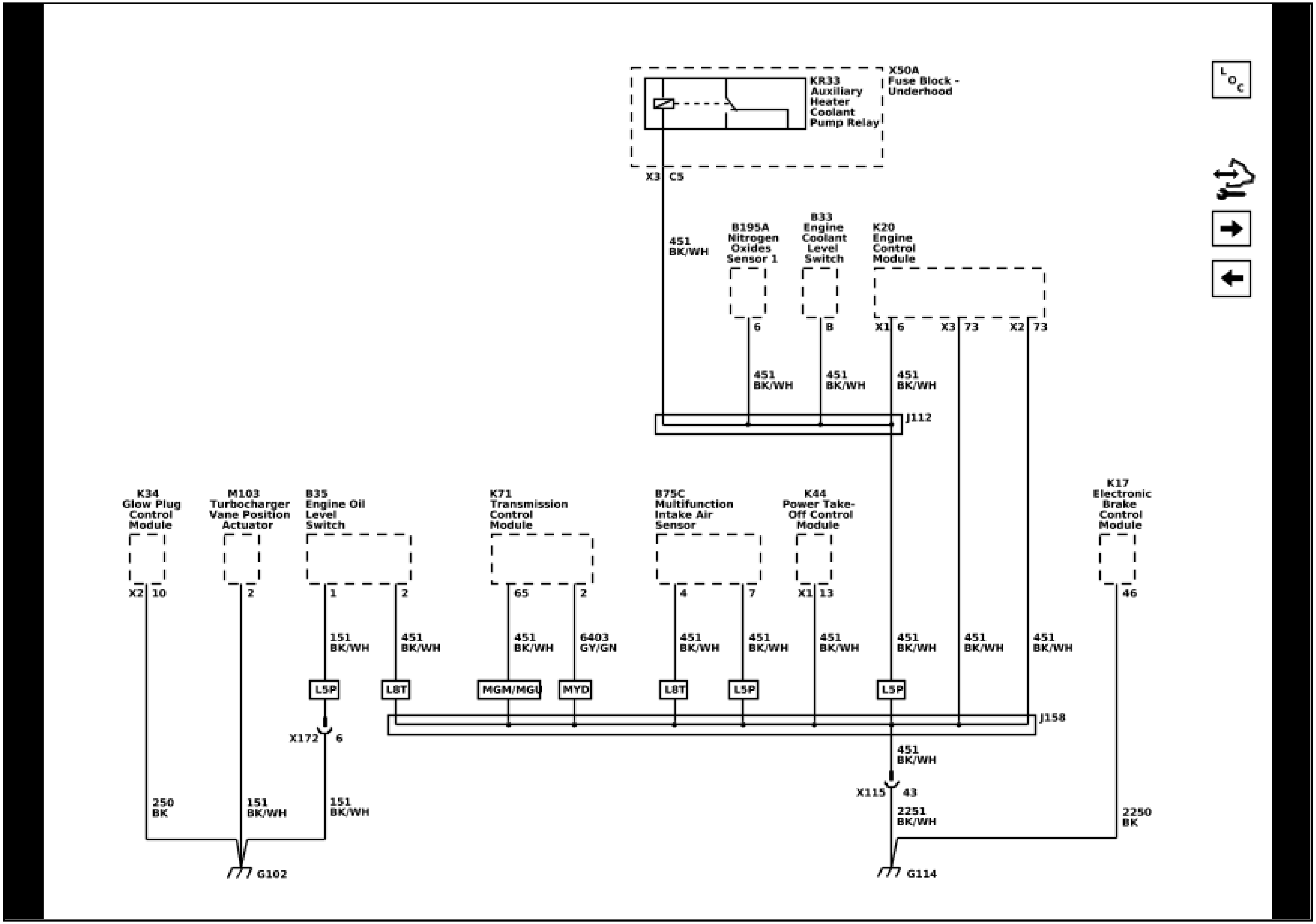
5995558

Ignition Lock Schematics (Ignition Lock)


K9
Body
Control
Module
X7 13
X4 8
-BTM
1932
GN/WH
1630
VT/GY
X225 36
11
1932
GN/WH
1630
VT/GY
3
S3
Transmission
Shift Lever
B81B
Park Position
Switch
1
M93
Key Capture
Solenoid
Actuator
2
4
1850
BK
1850
BK
G200

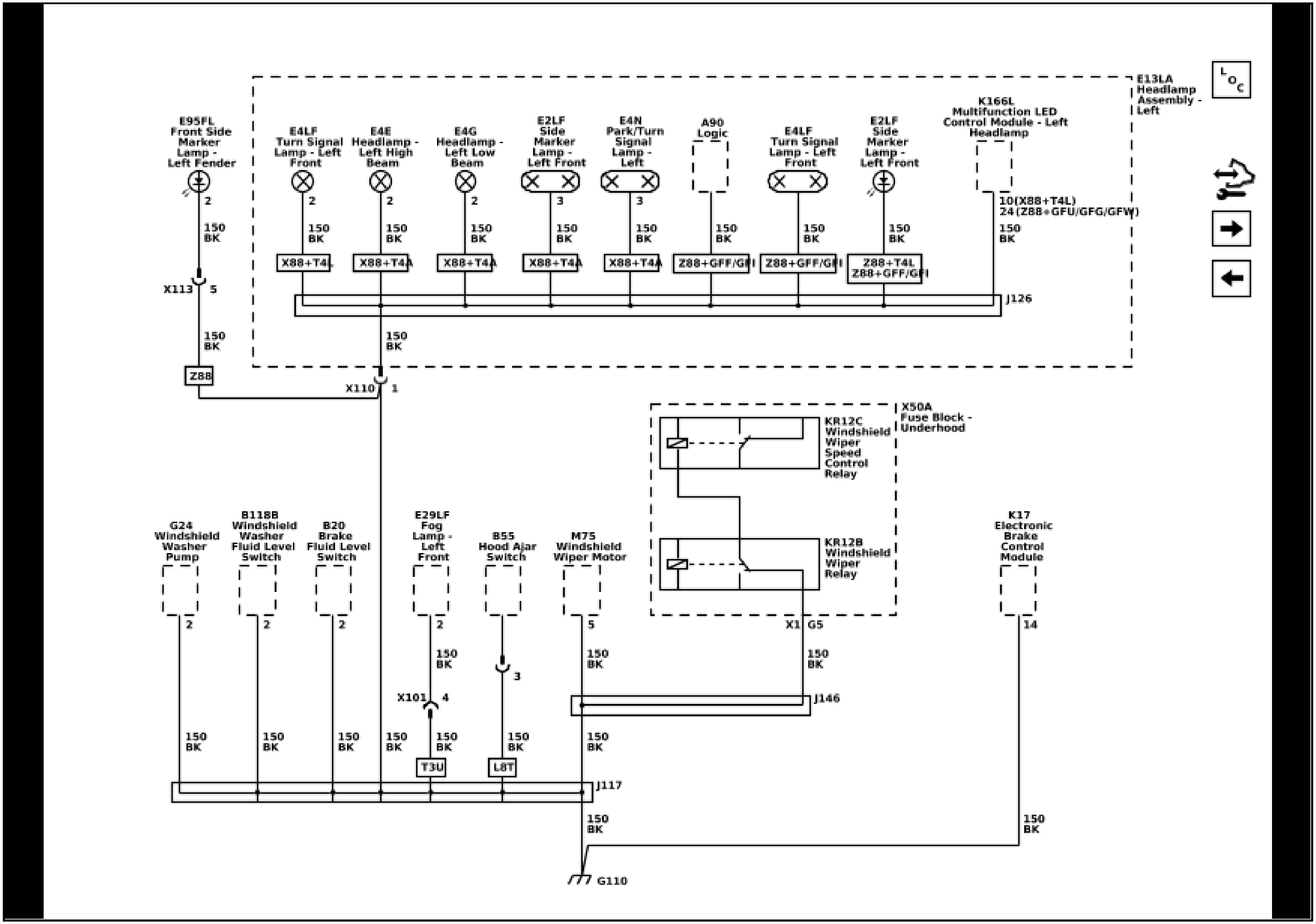
5995559

Ground Distribution Schematics (G102 and G114)

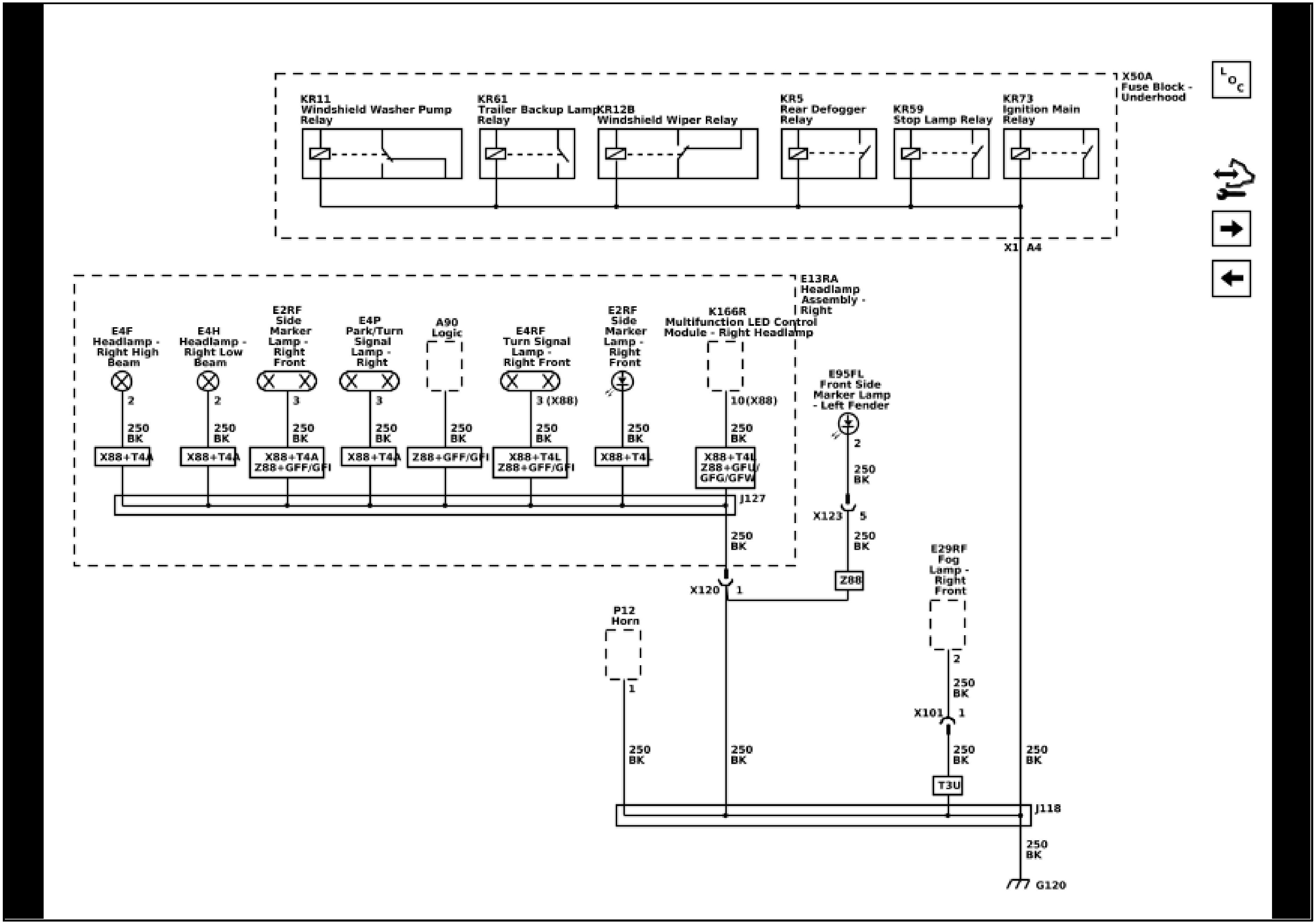

X50A
Fuse Block - Underhood
KR33
Auxiliary Heater Coolant Pump Relay
X3 C5
451 BK/WH
B195A
Nitrogen Oxides Sensor 1
6
B33
Engine Coolant Level Switch
B
K20
Engine Control Module
X1 6
X3 73
X2 73
451 BK/WH
J112
K34
Glow Plug Control Module
X2 10
M103
Turbocharger Vane Position Actuator
2
B35
Engine Oil Level Switch
1
2
K71
Transmission Control Module
65
2
B75C
Multifunction Intake Air Sensor
4
7
K44
Power Take-Off Control Module
X1 13
K17
Electronic Brake Control Module
46
151 BK/WH
6403 GY/GN
L5P
L8T
MGM/MGU
MYD
J158
X172 6
X115 43
250 BK
2251 BK/WH
2250 BK
G102
G114

5995560

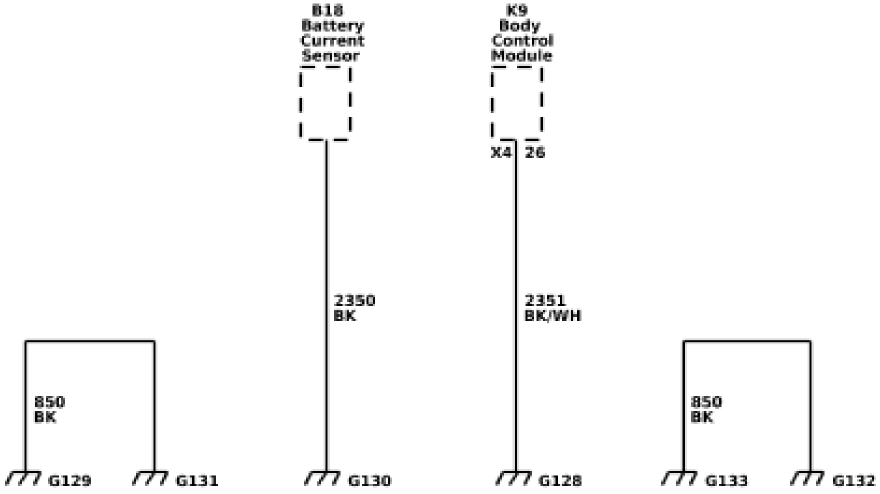
Ground Distribution Schematics (G110)


E95FL
Front Side Marker Lamp - Left Fender
E4LF
Turn Signal Lamp - Left Front
E4E
Headlamp - Left High Beam
E4G
Headlamp - Left Low Beam
E2LF
Side Marker Lamp - Left Front
E4N
Park/Turn Signal Lamp - Left
A90
Logic
E4LF
Turn Signal Lamp - Left Front
E2LF
Side Marker Lamp - Left Front
K166L
Multifunction LED Control Module - Left Headlamp
E13LA
Headlamp Assembly - Left
2
2
2
2
3
3
2
10(X88+T4L)
24(Z88+GFU/GFG/GFW)
150
BK
X88+T4L
X88+T4A
X88+T4A
X88+T4A
X88+T4A
Z88+GFF/GFI
Z88+GFF/GFI
Z88+T4L
Z88+GFF/GFI
J126
X113
5
Z88
X110
1
X50A
Fuse Block - Underhood
KR12C
Windshield Wiper Speed Control Relay
KR12B
Windshield Wiper Relay
X1 G5
G24
Windshield Washer Pump
B118B
Windshield Washer Fluid Level Switch
B20
Brake Fluid Level Switch
E29LF
Fog Lamp - Left Front
B55
Hood Ajar Switch
M75
Windshield Wiper Motor
K17
Electronic Brake Control Module
14
5
X101
4
3
J146
T3U
L8T
J117
G110
L
O
C
5995561

Ground Distribution Schematics (G120)

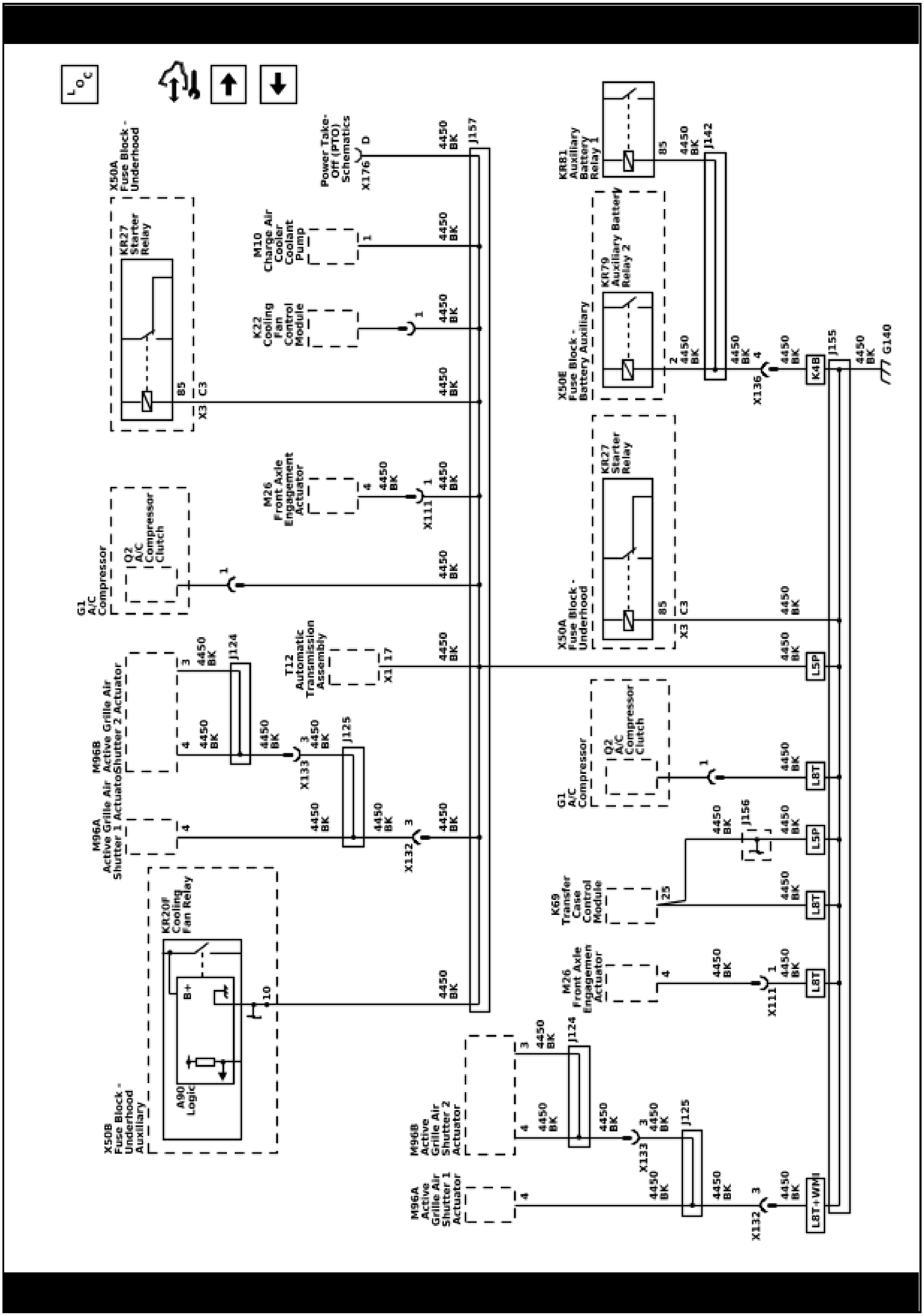

X50A
Fuse Block - Underhood
KR11
Windshield Washer Pump Relay
KR61
Trailer Backup Lamp Relay
KR12B
Windshield Wiper Relay
KR5
Rear Defogger Relay
KR59
Stop Lamp Relay
KR73
Ignition Main Relay
X1 A4
E13RA
Headlamp Assembly - Right
E4F
Headlamp - Right High Beam
E4H
Headlamp - Right Low Beam
E2RF
Side Marker Lamp - Right Front
E4P
Park/Turn Signal Lamp - Right
A90
Logic
E4RF
Turn Signal Lamp - Right Front
E2RF
Side Marker Lamp - Right Front
K166R
Multifunction LED Control Module - Right Headlamp
2
2
3
3
3 (X88)
10(X88)
250 BK
X88+T4A
X88+T4A
X88+T4A Z88+GFF/GFI
X88+T4A
Z88+GFF/GFI
X88+T4L Z88+GFF/GFI
X88+T4L
X88+T4L Z88+GFU/ GFG/GFW
J127
E95FL
Front Side Marker Lamp - Left Fender
2
X123 5
Z88
X120 1
P12
Horn
1
E29RF
Fog Lamp - Right Front
2
X101 1
T3U
J118
G120

Ground Distribution Schematics (G128, G129, G130, G131, G132 and G133)

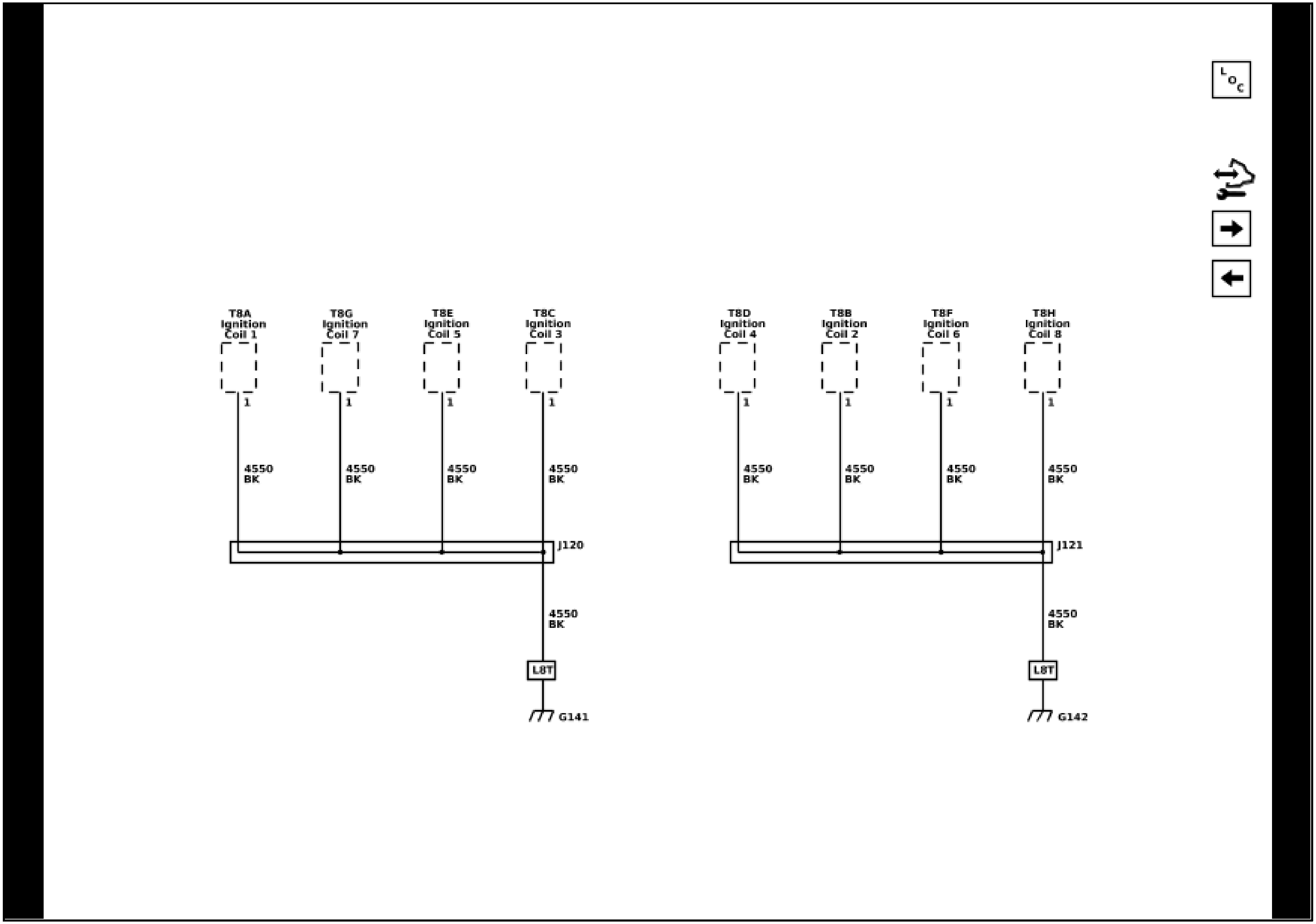

B18
Battery
Current
Sensor
K9
Body
Control
Module
X4 26
2350
BK
2351
BK/WH
850
BK
850
BK
G129
G131
G130
G128
G133
G132

5995563

Ground Distribution Schematics (G140)

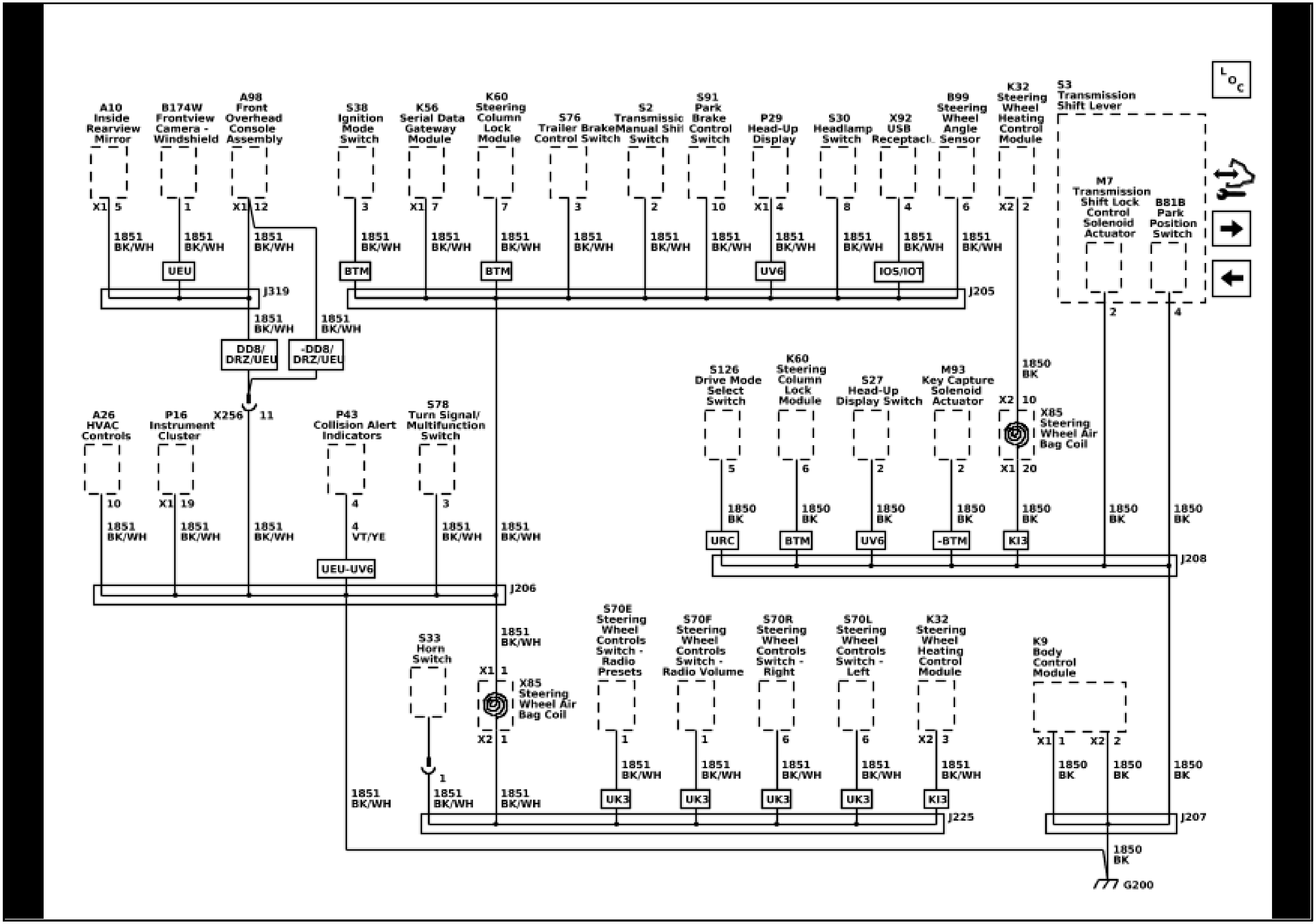

5995564
X50A Fuse Block - Underhood
KR27 Starter Relay
85
X3 C3
G1 A/C Compressor
Q2 A/C Compressor Clutch
1
M96B Active Grille Air Shutter 2 Actuator
M96A Active Grille Air Shutter 1 Actuator
3
4
4450 BK
J124
X133
J125
X132
X50B Fuse Block - Underhood Auxiliary
KR20F Cooling Fan Relay
A90 Logic
B+
10
Power Take-Off (PTO) Schematics
X176 D
M10 Charge Air Cooler Coolant Pump
K22 Cooling Fan Control Module
M26 Front Axle Engagement Actuator
X111
T12 Automatic Transmission Assembly
X1 17
J157
KR81 Auxiliary Battery Relay 1
J142
X50E Fuse Block - Battery Auxiliary
KR79 Auxiliary Battery Relay 2
2
X136
K4B
J155
G140
L5P
L8T
K69 Transfer Case Control Module
25
J156
L8T+WMI

Ground Distribution Schematics (G141 and G142)

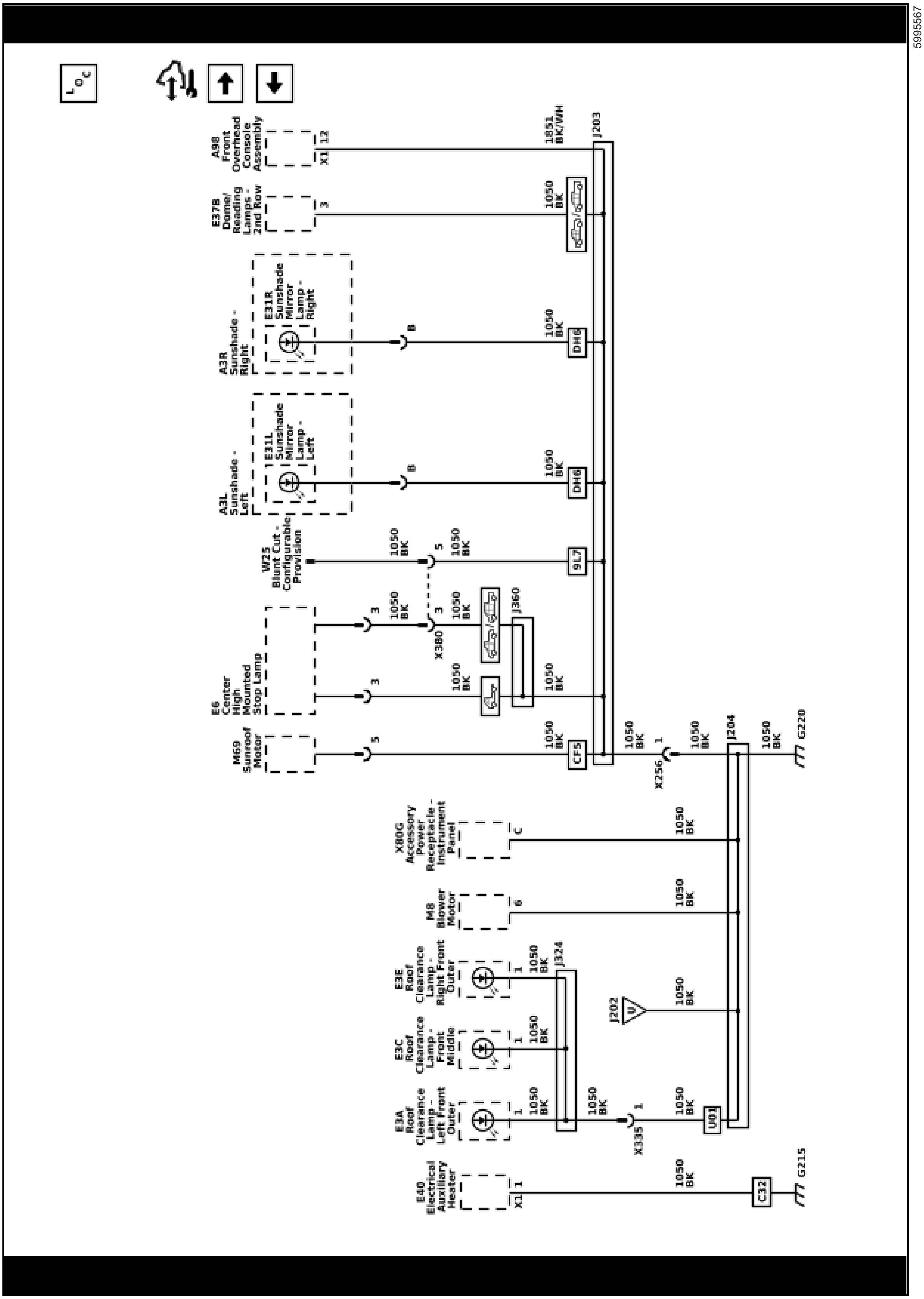

T8A Ignition Coil 1
T8G Ignition Coil 7
T8E Ignition Coil 5
T8C Ignition Coil 3
T8D Ignition Coil 4
T8B Ignition Coil 2
T8F Ignition Coil 6
T8H Ignition Coil 8
1
4550 BK
J120
J121
L8T
G141
G142

5995565

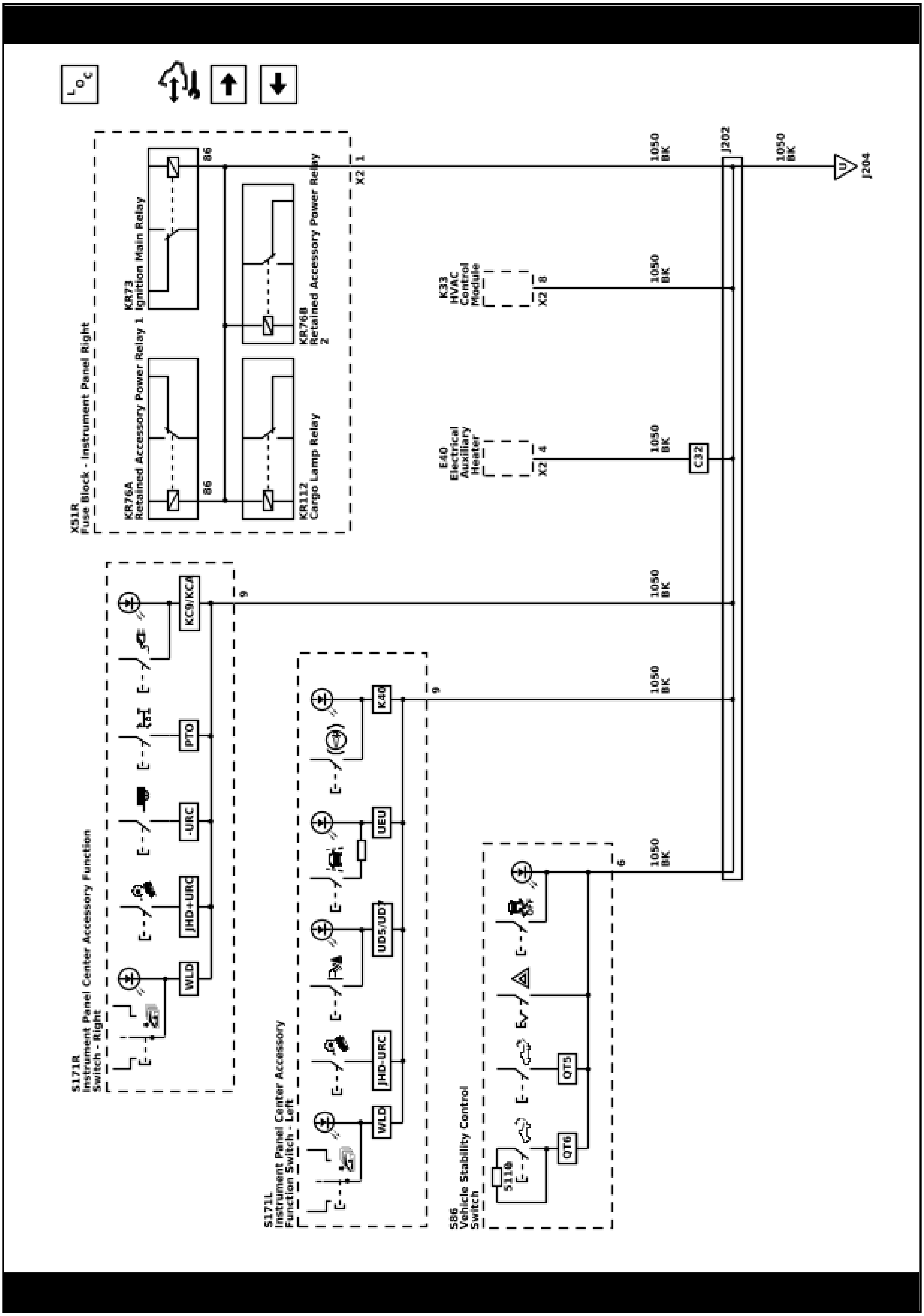
Ground Distribution Schematics (G200)


A10 Inside Rearview Mirror
X1 5
B174W Frontview Camera - Windshield
1
A98 Front Overhead Console Assembly
X1 12
S38 Ignition Mode Switch
3
K56 Serial Data Gateway Module
X1 7
K60 Steering Column Lock Module
7
S76 Trailer Brake Control Switch
3
S2 Transmission Manual Shift Switch
2
S91 Park Brake Control Switch
10
P29 Head-Up Display
X1 4
S30 Headlamp Switch
8
X92 USB Receptacle
4
B99 Steering Wheel Angle Sensor
6
K32 Steering Wheel Heating Control Module
X2 2
S3 Transmission Shift Lever
M7 Transmission Shift Lock Control Solenoid Actuator
B81B Park Position Switch
2
4
1851 BK/WH
UEU
BTM
UV6
IOS/IOT
J319
J205
DD8/ DRZ/UEU
-DD8/ DRZ/UEU
X256 11
A26 HVAC Controls
10
P16 Instrument Cluster
X1 19
P43 Collision Alert Indicators
4
4 VT/YE
UEU-UV6
S78 Turn Signal/ Multifunction Switch
3
J206
S126 Drive Mode Select Switch
5
K60 Steering Column Lock Module
6
S27 Head-Up Display Switch
2
M93 Key Capture Solenoid Actuator
2
X85 Steering Wheel Air Bag Coil
X2 10
X1 20
1850 BK
URC
BTM
UV6
-BTM
KI3
J208
S33 Horn Switch
1
X85 Steering Wheel Air Bag Coil
X1 1
X2 1
S70E Steering Wheel Controls Switch - Radio Presets
1
S70F Steering Wheel Controls Switch - Radio Volume
1
S70R Steering Wheel Controls Switch - Right
6
S70L Steering Wheel Controls Switch - Left
6
K32 Steering Wheel Heating Control Module
X2 3
UK3
KI3
J225
K9 Body Control Module
X1 1
X2 2
J207
G200
5995566

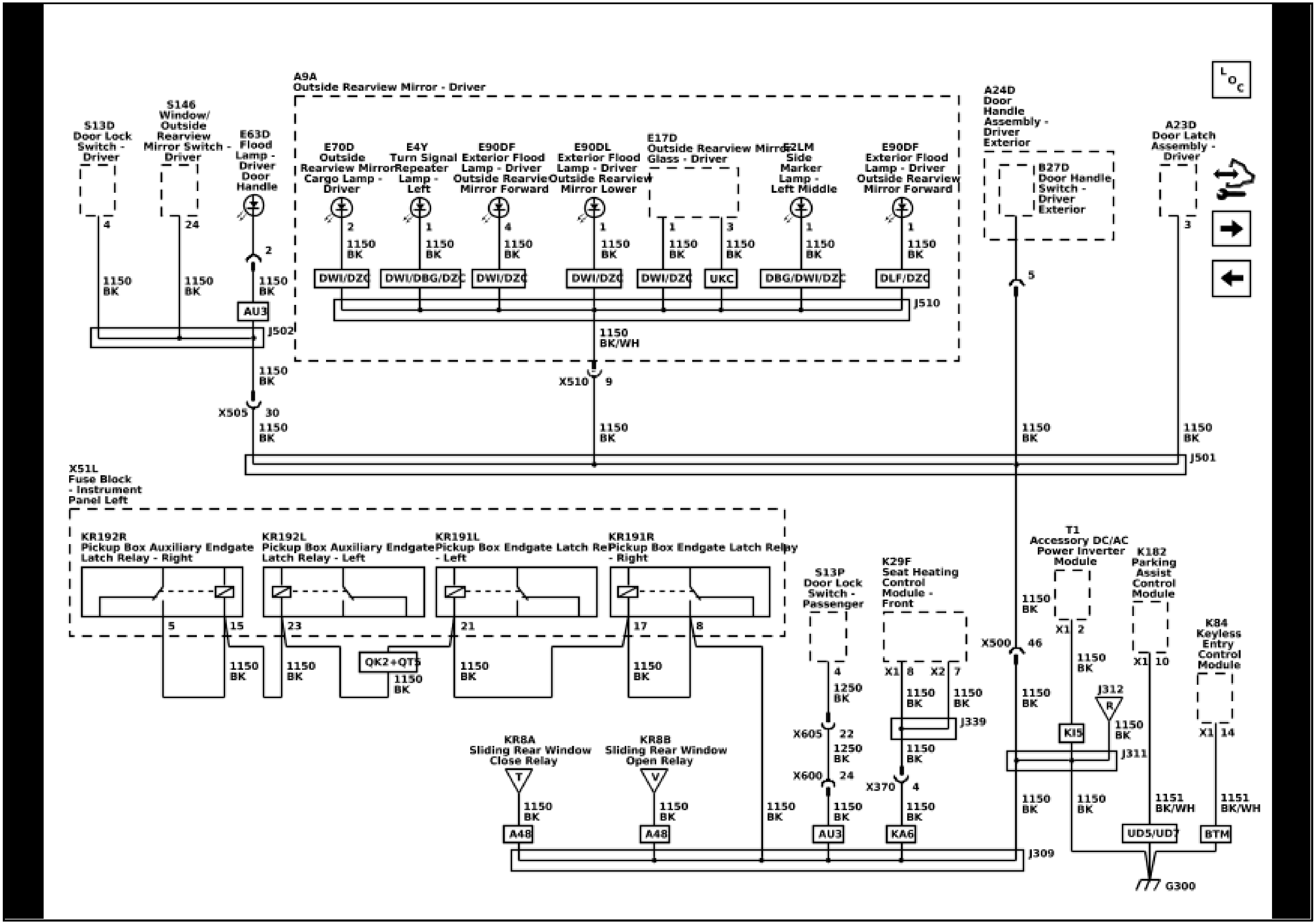
Ground Distribution Schematics (G215 and G220 (1 of 2))


5995567
A98 Front Overhead Console Assembly
X1 12
1851 BK/WH
J203
E37B Dome/ Reading Lamps - 2nd Row
3
1050 BK
A3R Sunshade - Right
E31R Sunshade Mirror Lamp - Right
B
DH6
A3L Sunshade - Left
E31L Sunshade Mirror Lamp - Left
W25 Blunt Cut - Configurable Provision
5
9L7
E6 Center High Mounted Stop Lamp
3
X380
J360
M69 Sunroof Motor
CF5
1
X256
J204
G220
X80G Accessory Power Receptacle - Instrument Panel
C
M8 Blower Motor
6
E3E Roof Clearance Lamp - Right Front Outer
J324
E3C Roof Clearance Lamp - Front Middle
J202
U
E3A Roof Clearance Lamp - Left Front Outer
X335
U01
E40 Electrical Auxiliary Heater
X1 1
C32
G215

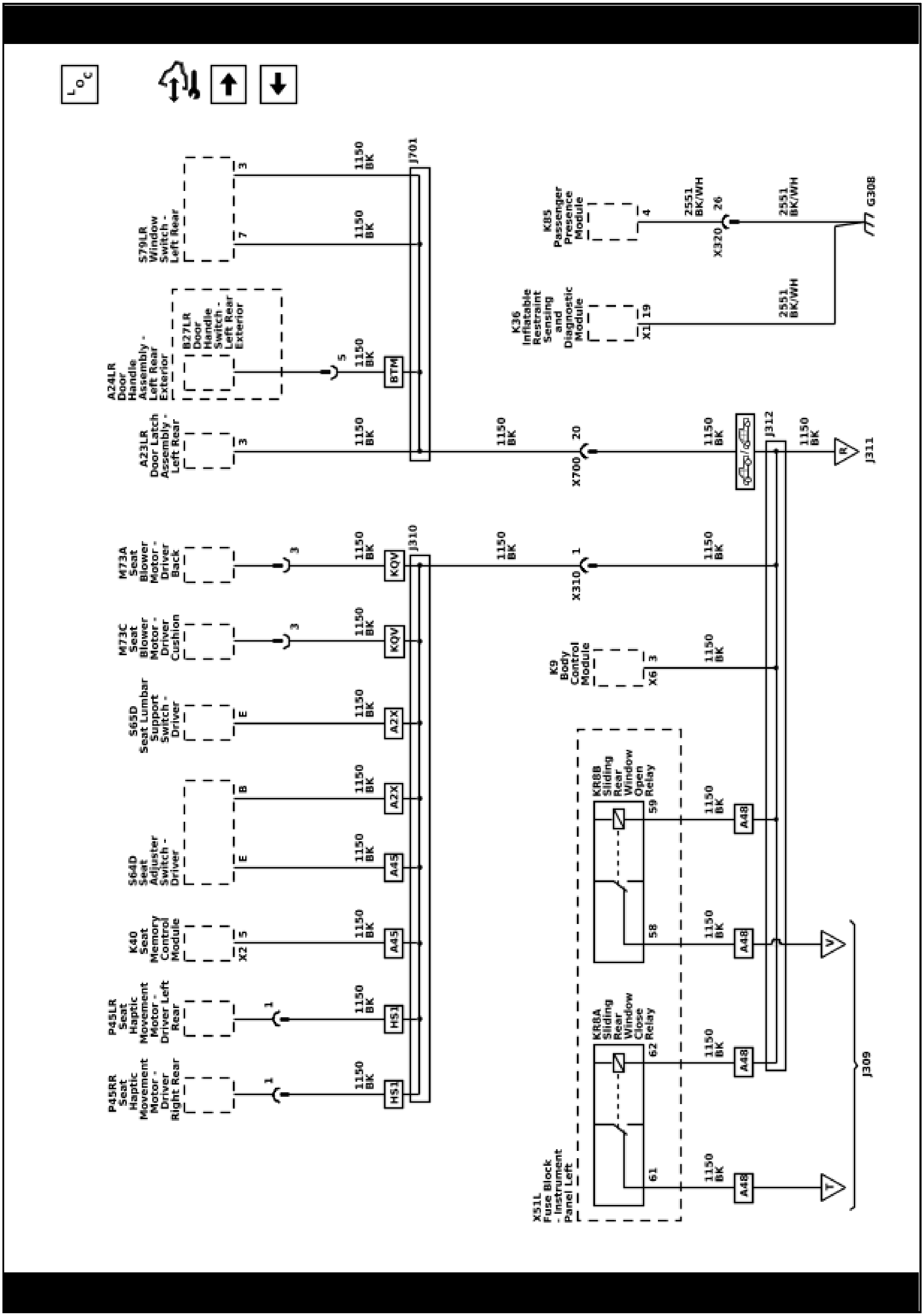
Ground Distribution Schematics (G215 and G220 (2 of 2))


5995568
X51R
Fuse Block - Instrument Panel Right
KR76A
Retained Accessory Power Relay 1
86
KR73
Ignition Main Relay
86
KR112
Cargo Lamp Relay
KR76B
Retained Accessory Power Relay 2
X2 1
K33
HVAC
Control
Module
X2 8
E40
Electrical
Auxiliary
Heater
X2 4
C32
1050
BK
J202
J204
U
S171R
Instrument Panel Center Accessory Function Switch - Right
WLD
JHD+URC
-URC
PTO
KC9/KCA
9
S171L
Instrument Panel Center Accessory Function Switch - Left
WLD
JHD+URC
UD5/UD7
UEU
K40
9
S86
Vehicle Stability Control Switch
511Ω
QT6
QT5
OFF
6

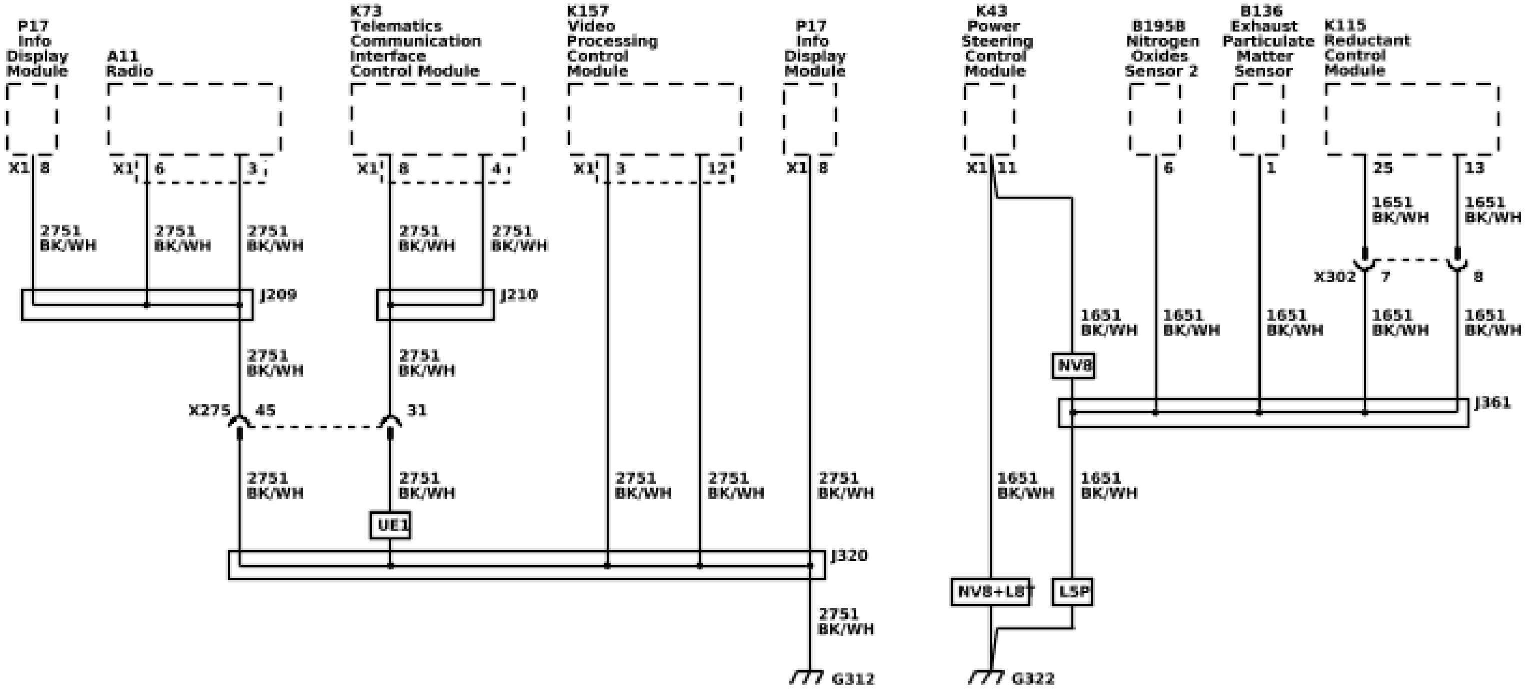
Ground Distribution Schematics (G300 and G308 (1 of 2))


S13D Door Lock Switch - Driver
4
1150 BK
S146 Window/ Outside Rearview Mirror Switch - Driver
24
1150 BK
E63D Flood Lamp - Driver Door Handle
2
1150 BK
AU3
J502
1150 BK
X505
30
1150 BK
A9A Outside Rearview Mirror - Driver
E70D Outside Rearview Mirror Cargo Lamp - Driver
E4Y Turn Signal Repeater Lamp - Left
E90DF Exterior Flood Lamp - Driver Outside Rearview Mirror Forward
E90DL Exterior Flood Lamp - Driver Outside Rearview Mirror Lower
E17D Outside Rearview Mirror Glass - Driver
E2LM Side Marker Lamp - Left Middle
E90DF Exterior Flood Lamp - Driver Outside Rearview Mirror Forward
2
1
4
1
1
3
1
1
1150 BK
DWI/DZC
DWI/DBG/DZC
DWI/DZC
DWI/DZC
DWI/DZC
UKC
DBG/DWI/DZC
DLF/DZC
J510
1150 BK/WH
X510
9
1150 BK
A24D Door Handle Assembly - Driver Exterior
B27D Door Handle Switch - Driver Exterior
5
1150 BK
A23D Door Latch Assembly - Driver
3
1150 BK
J501
L O C
X51L Fuse Block - Instrument Panel Left
KR192R Pickup Box Auxiliary Endgate Latch Relay - Right
KR192L Pickup Box Auxiliary Endgate Latch Relay - Left
KR191L Pickup Box Endgate Latch Relay - Left
KR191R Pickup Box Endgate Latch Relay - Right
5
15
23
21
17
8
1150 BK
QK2+QT5
1150 BK
KR8A Sliding Rear Window Close Relay
T
KR8B Sliding Rear Window Open Relay
V
1150 BK
A48
A48
1150 BK
S13P Door Lock Switch - Passenger
4
1250 BK
X605
22
1250 BK
X600
24
1150 BK
AU3
K29F Seat Heating Control Module - Front
X1 8
X2 7
1150 BK
J339
1150 BK
X370
4
1150 BK
KA6
X500
46
1150 BK
J309
T1 Accessory DC/AC Power Inverter Module
X1 2
1150 BK
KI5
J312
R
1150 BK
J311
K182 Parking Assist Control Module
X1 10
1151 BK/WH
UD5/UD7
K84 Keyless Entry Control Module
X1 14
1151 BK/WH
BTM
G300
5995569

Ground Distribution Schematics (G300 and G308 (2 of 2))

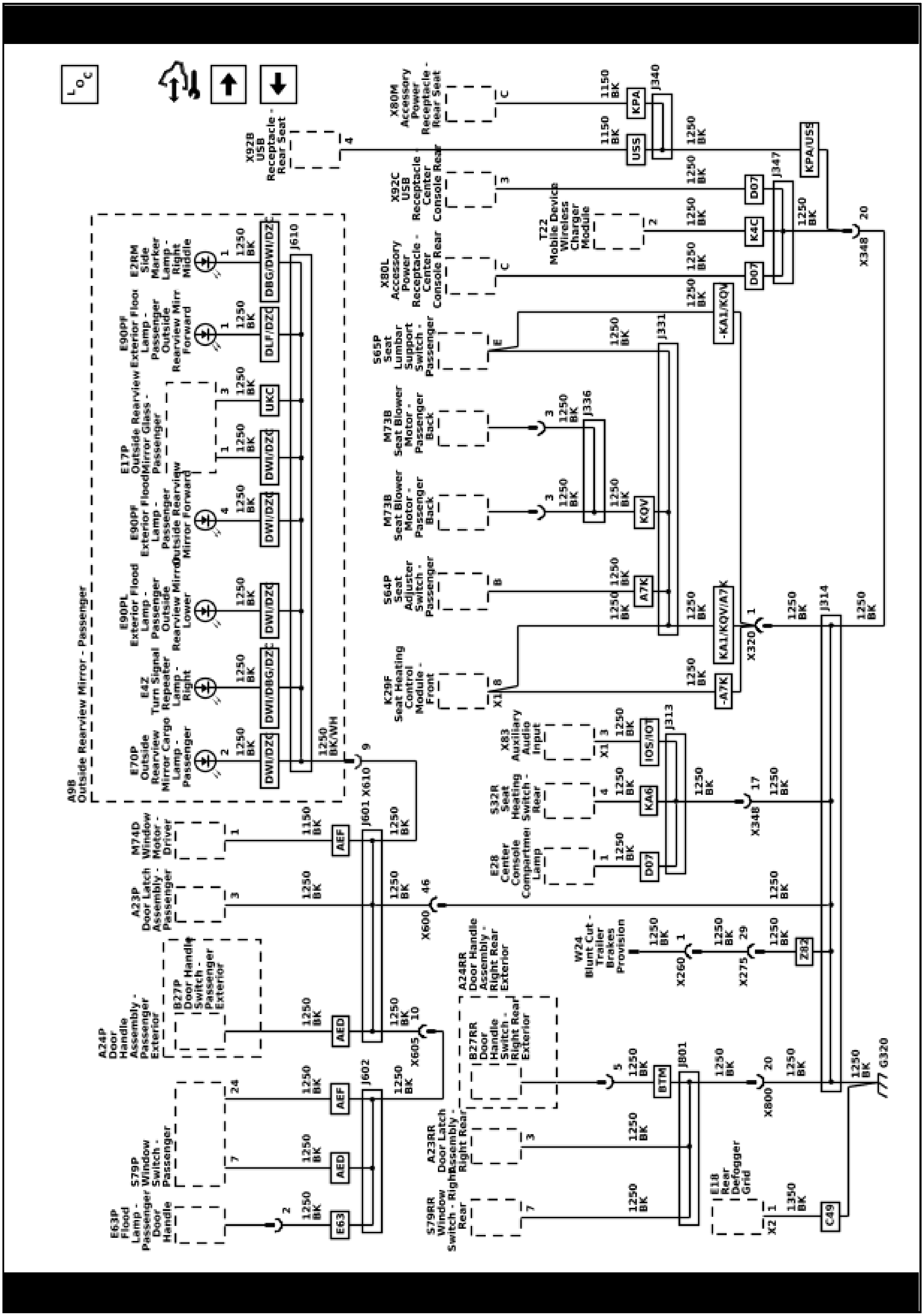

5995570
P45RR Seat Haptic Movement Motor - Driver Right Rear
P45LR Seat Haptic Movement Motor - Driver Left Rear
K40 Seat Memory Control Module
S64D Seat Adjuster Switch - Driver
S65D Seat Lumbar Support Switch - Driver
M73C Seat Blower Motor - Driver Cushion
M73A Seat Blower Motor - Driver Back
A23LR Door Latch Assembly - Left Rear
A24LR Door Handle Assembly - Left Rear Exterior
B27LR Door Handle Switch - Left Rear Exterior
S79LR Window Switch - Left Rear
K36 Inflatable Restraint Sensing and Diagnostic Module
K85 Passenger Presence Module
K9 Body Control Module
X51L Fuse Block - Instrument Panel Left
KR8A Sliding Rear Window Close Relay
KR8B Sliding Rear Window Open Relay
1150 BK
2551 BK/WH
HS1
A45
A2X
KQV
BTM
A48
J310
J701
J312
J311
J309
X700 20
X310 1
X320 26
X1 19
X2 5
X6 3
G308
1
5
3
E
B
7
4
58
59
61
62
R
V
T

Ground Distribution Schematics (G312 and G322)

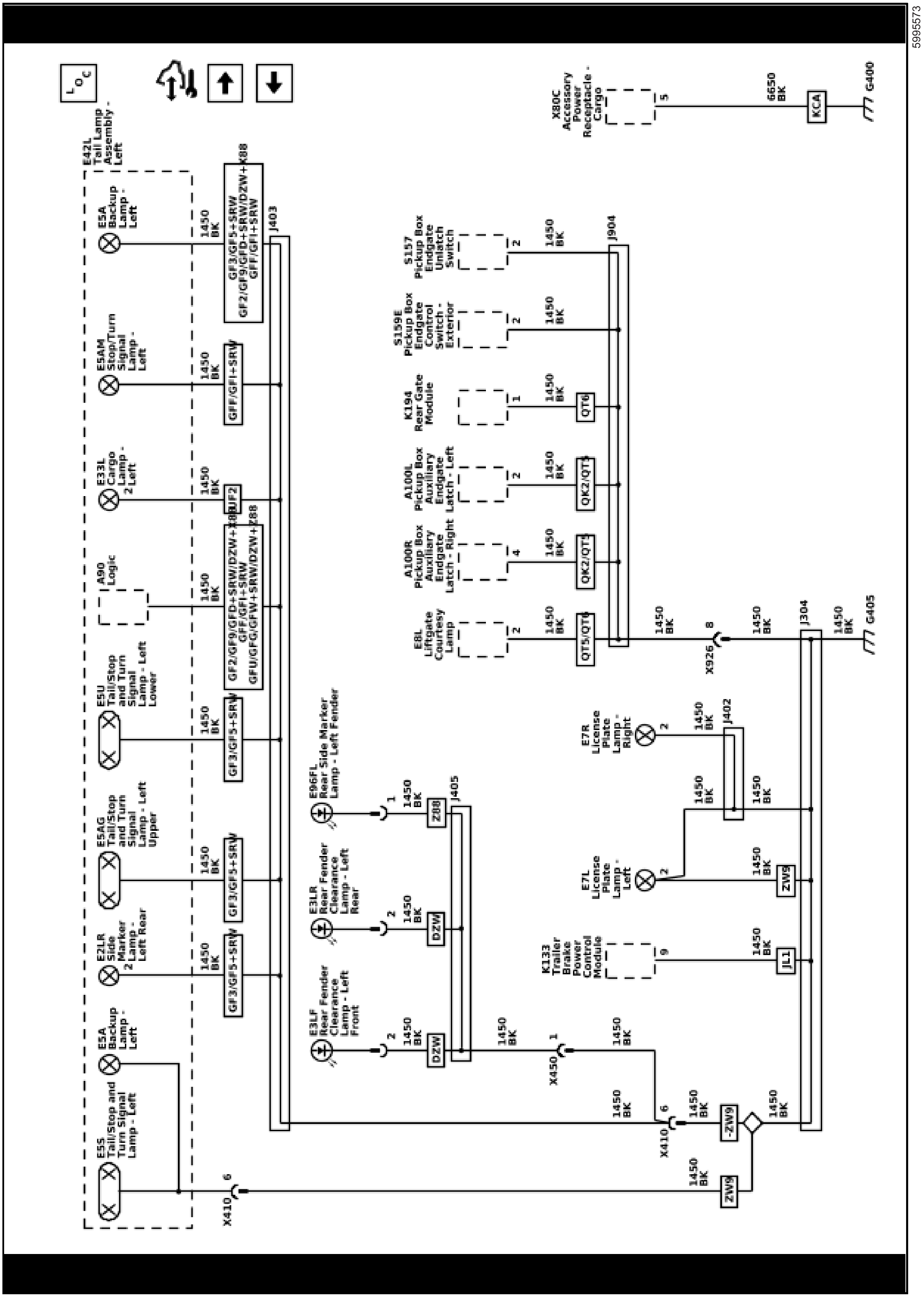

P17 Info Display Module
X1 8
2751 BK/WH
A11 Radio
X1 6
3
J209
X275
45
K73 Telematics Communication Interface Control Module
X1 8
4
J210
31
UE1
K157 Video Processing Control Module
X1 3
12
P17 Info Display Module
X1 8
J320
2751 BK/WH
G312
K43 Power Steering Control Module
X1 11
NV8
NV8+L8T
L5P
G322
1651 BK/WH
B1958 Nitrogen Oxides Sensor 2
6
B136 Exhaust Particulate Matter Sensor
1
K115 Reductant Control Module
25
13
X302
7
8
J361

5995571

Ground Distribution Schematics (G320)


5995572
A98 Outside Rearview Mirror - Passenger
E70P Outside Rearview Mirror Cargo Lamp - Passenger
E4Z Turn Signal Repeater Lamp - Right
E90PL Exterior Flood Lamp - Passenger Outside Rearview Mirror Lower
E90PF Exterior Flood Lamp - Passenger Outside Rearview Mirror Middle
E17P Outside Rearview Mirror Glass - Passenger
E90PF Exterior Flood Lamp - Passenger Outside Rearview Mirror Forward
E2RM Side Marker Lamp - Right Middle
J610
X610
M74D Window Motor - Driver
A23P Door Latch Assembly - Passenger
A24P Door Handle Assembly - Passenger Exterior
B27P Door Handle Switch - Passenger Exterior
E63P Flood Lamp - Passenger Door Handle
S79P Window Switch - Passenger
J601
J602
X600
X605
K29F Seat Heating Control Module - Front
S64P Seat Adjuster Switch - Passenger
M73B Seat Blower Motor - Passenger Back
S65P Seat Lumbar Support Switch - Passenger
X80L Accessory Power Receptacle - Center Console Rear
X92C USB Receptacle - Center Console Rear
X92B USB Receptacle - Rear Seat
X80M Accessory Power Receptacle - Rear Seat
T22 Mobile Device Wireless Charger Module
J331
J336
J347
J340
J314
J313
X320
X348
X83 Auxiliary Audio Input
S32R Seat Heating Switch - Rear
E28 Center Console Compartment Lamp
W24 Blunt Cut - Trailer Brakes Provision
X260
X275
A24RR Door Handle Assembly - Right Rear Exterior
B27RR Door Handle Switch - Right Rear Exterior
A23RR Door Latch Assembly - Right Rear
S79RR Window Switch - Right Rear
J801
X800
E18 Rear Defogger Grid
G320
1250 BK
1150 BK
1350 BK
1250 BK/WH

Ground Distribution Schematics (G400 and G405)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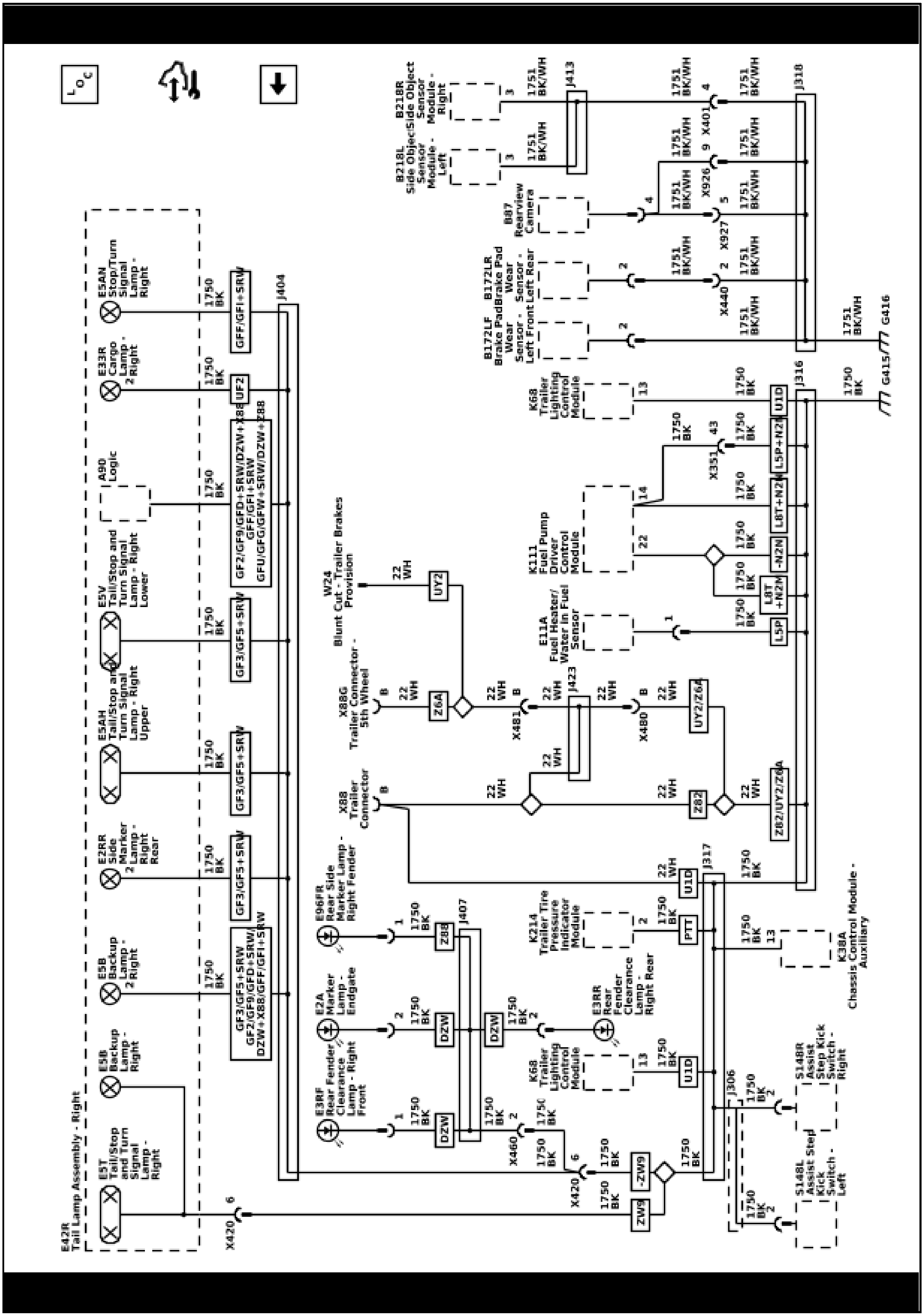
E42L Tail Lamp Assembly - Left
E5S Tail/Stop and Turn Signal Lamp - Left
E5A Backup Lamp - Left
E2LR Side Marker Lamp - Left Rear
E5AG Tail/Stop and Turn Signal Lamp - Left Upper
E5U Tail/Stop and Turn Signal Lamp - Left Lower
A90 Logic
E33L Cargo Lamp - Left
E5AM Stop/Turn Signal Lamp - Left
GF3/GF5+SRW
GF2/GF9/GFD+SRW/DZW+K88
GFF/GFI+SRW
UF2
GF2/GF9/GFD+SRW/DZW+K88 GFF/GFI+SRW GFU/GFG/GFW+SRW/DZW+Z88
J403
1450 BK
X410
6
E3LF Rear Fender Clearance Lamp - Left Front
E3LR Rear Fender Clearance Lamp - Left Rear
E96FL Rear Side Marker Lamp - Left Fender
DZW
Z88
J405
X450
1
2
E8L Liftgate Courtesy Lamp
A100R Pickup Box Auxiliary Endgate Latch - Right
A100L Pickup Box Auxiliary Endgate Latch - Left
K194 Rear Gate Module
S159E Pickup Box Endgate Control Switch - Exterior
S157 Pickup Box Endgate Unlatch Switch
QT5/QT6
QK2/QT5
QT6
J904
X926
8
X80C Accessory Power Receptacle - Cargo
5
6650 BK
KCA
G400
G405
J304
E7R License Plate Lamp - Right
E7L License Plate Lamp - Left
J402
ZW9
-ZW9
K133 Trailer Brake Power Control Module
9
JL1
4

Ground Distribution Schematics (G415 and G416)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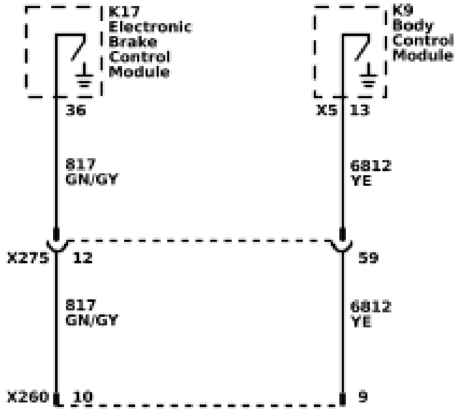
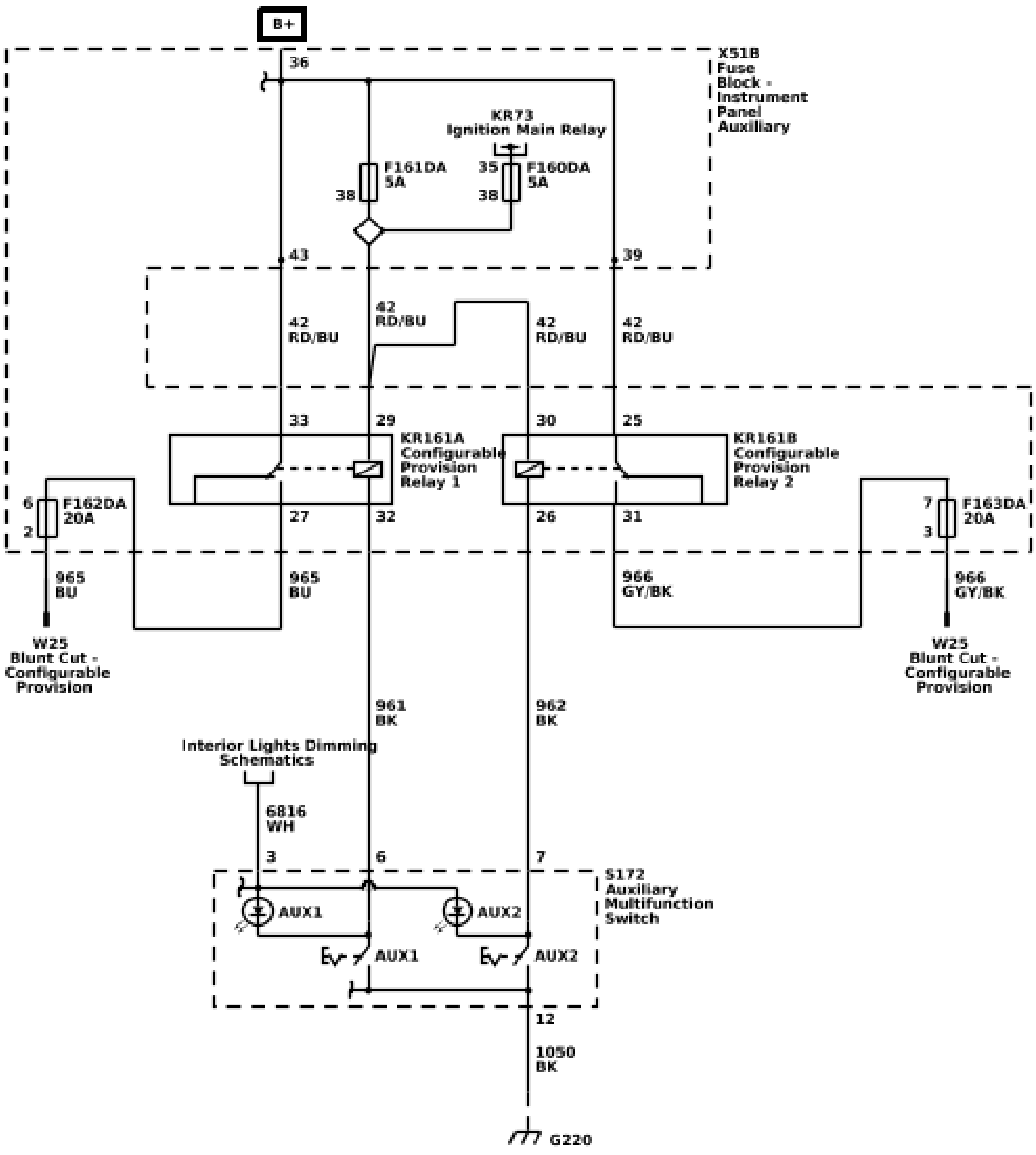
E42R Tail Lamp Assembly - Right
E5T Tail/Stop and Turn Signal Lamp - Right
E5B Backup Lamp - Right
E5B Backup Lamp - 2 Right
E2RR Side Marker 2 Lamp - Right Rear
E5AH Tail/Stop and Turn Signal Lamp - Right Upper
E5V Tail/Stop and Turn Signal Lamp - Right Lower
A90 Logic
E33R Cargo Lamp - 2 Right
E5AN Stop/Turn Signal Lamp - Right
1750 BK
GF3/GF5+SRW GF2/GF9/GFD+SRW/ GFF/GFG/GFI+SRW DZW+X88/GFF/GFI+SRW
GF3/GF5+SRW
GF2/GF9/GFD+SRW/DZW+X88 GFF/GFI+SRW GFU/GFG/GFW+SRW/DZW+Z88
UF2
GFF/GFI+SRW
J404
X420 6
X460 2
E3RF Rear Fender Clearance Lamp - Right Front
E2A Marker Lamp - Endgate
E96FR Rear Side Marker Lamp - Right Fender
E3RR Rear Fender Clearance Lamp - Right Rear
DZW
Z88
J407
X88 Trailer Connector B
X88G Trailer Connector - 5th Wheel B
W24 Blunt Cut - Trailer Brakes Provision
22 WH
Z6A
UY2
X481 B
X480 B
J423
Z82
UY2/Z6A
Z82/UY2/Z6A
U1D
J317
ZW9
-ZW9
K68 Trailer Lighting Control Module 13
K214 Trailer Tire Pressure Indicator Module 2
PTT
K38A Chassis Control Module - Auxiliary 13
J306
S148L Assist Step Kick Switch - Left 2
S148R Assist Step Kick Switch - Right 2
E11A Fuel Heater/ Water in Fuel Sensor 1
K111 Fuel Pump Driver Control Module 22 14
X351 43
L5P
L8T +N2M
-N2N
L8T+N2N
L5P+N2N
K68 Trailer Lighting Control Module 13
J316
G415
G416
B172LF Brake Pad Wear Sensor - Left Front 2
B172LR Brake Pad Wear Sensor - Left Rear 2
X440 2
B87 Rearview Camera 4
X927 5
X926 9
X401 4
B218L Side Object Sensor Module - Left 3
B218R Side Object Sensor Module - Right 3
1751 BK/WH
J413
J318

Upfitter Provision Schematics (Upfitter Provisions - Signals)

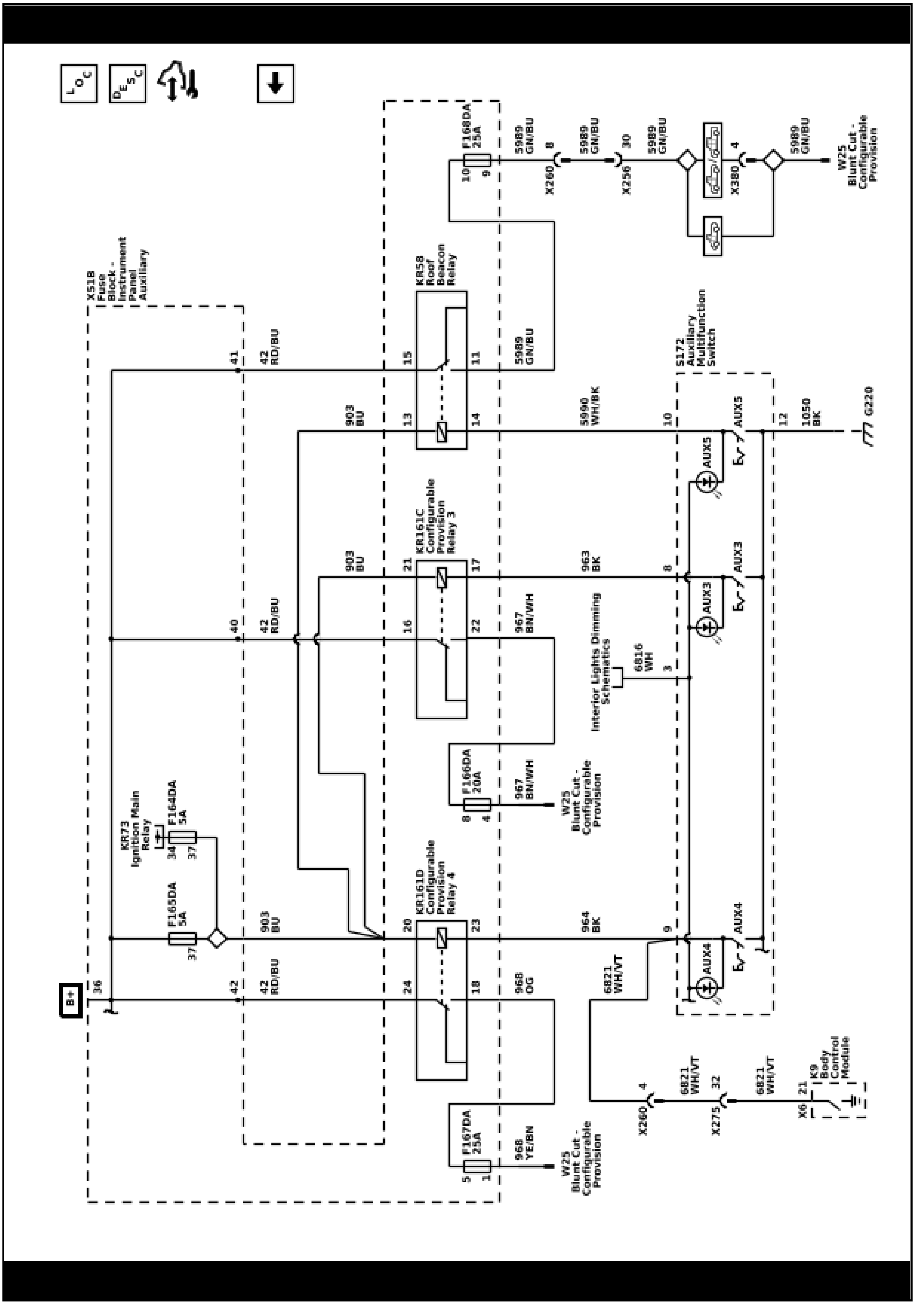

K17
Electronic
Brake
Control
Module
36
817
GN/GY
X275
12
817
GN/GY
X260
10
K9
Body
Control
Module
X5
13
6812
YE
59
6812
YE
9

5995575

Upfitter Provision Schematics (Upfitter Provisions - 1 of 2 (9L7))


B+
36
X51B Fuse Block - Instrument Panel Auxiliary
KR73 Ignition Main Relay
F161DA 5A
38
35
F160DA 5A
38
43
39
42 RD/BU
42 RD/BU
42 RD/BU
42 RD/BU
33
29
30
25
KR161A Configurable Provision Relay 1
KR161B Configurable Provision Relay 2
6
2
F162DA 20A
7
3
F163DA 20A
27
32
26
31
965 BU
965 BU
966 GY/BK
966 GY/BK
W25 Blunt Cut - Configurable Provision
W25 Blunt Cut - Configurable Provision
961 BK
962 BK
Interior Lights Dimming Schematics
6816 WH
3
6
7
S172 Auxiliary Multifunction Switch
AUX1
AUX2
AUX1
AUX2
12
1050 BK
G220
5995576

Upfitter Provision Schematics (Upfitter Provisions - 2 of 2 (9L7))


5995577
B+
36
42
41
40
X51B Fuse Block - Instrument Panel Auxiliary
KR73 Ignition Main Relay
34
37
F164DA 5A
F165DA 5A
37
42 RD/BU
903 BU
KR161D Configurable Provision Relay 4
20
23
24
18
968 OG
964 BK
F167DA 25A
5
1
968 YE/BN
W25 Blunt Cut - Configurable Provision
KR161C Configurable Provision Relay 3
21
17
16
22
967 BN/WH
963 BK
F166DA 20A
8
4
967 BN/WH
W25 Blunt Cut - Configurable Provision
KR58 Roof Beacon Relay
13
14
15
11
5990 WH/BK
5989 GN/BU
F168DA 25A
10
9
5989 GN/BU
8
X260
5989 GN/BU
30
X256
5989 GN/BU
4
X380
5989 GN/BU
W25 Blunt Cut - Configurable Provision
Interior Lights Dimming Schematics
6816 WH
3
S172 Auxiliary Multifunction Switch
10
9
12
AUX5
AUX3
AUX4
1050 BK
G220
6821 WH/VT
4
X260
6821 WH/VT
32
X275
6821 WH/VT
21
X6
K9 Body Control Module

Component Locator

Master Electrical Component List

Code	Name	Option	Location	Locator View	Connector End View
A3L	Sunshade - Left	—	In the passenger compartment, at the front of the headliner	—	—
A3R	Sunshade - Right	—	In the passenger compartment, at the front of the headliner	—	—
A6C	Fuel Pump and Level Sensor Assembly - Primary	—	Under the vehicle, mounted in the front fuel tank	• *Underbody Components - Middle* • *Underbody Components - Right Rear (Chassis Cab)*	*A6C Fuel Pump and Level Sensor Assembly - Primary (-(N2M/N2L))*
A6D	Fuel Pump and Level Sensor Assembly - Secondary	N2N	under the vehicle, mounted in the rear fuel tank	*Underbody Components - Right Rear (Chassis Cab)*	*A6D Fuel Pump and Level Sensor Assembly - Secondary (N2N)*
A9A	Outside Rearview Mirror - Driver	—	Outside the vehicle, at the front of the driver door	—	*A9A Outside Rearview Mirror - Driver*
A9B	Outside Rearview Mirror - Passenger	—	Outside the vehicle, at the front of the passenger door	—	*A9B Outside Rearview Mirror - Passenger*
A10	Inside Rearview Mirror	—	In the passenger compartment, at the top center of the windshield	*Headliner Components*	• *A10 Inside Rearview Mirror X1 (-UEU)* • *A10 Inside Rearview Mirror X1 (UEU)* • *A10 Inside Rearview Mirror X2 (DRZ)*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
A11	Radio	—	In the passenger compartment, right front, between the instrument panel and bulkhead	Instrument Panel - Right Rear Components	• A11 Radio X1 (IOR) • A11 Radio X2 (IOR) • A11 Radio X3 (IOR) • A11 Radio X3 (IOS/IOT) • A11 Radio X4 (IOR) • A11 Radio X5 (IOR) • A11 Radio X6 (IOR) • A11 Radio X8 (IOR) • A11 Radio X5 (IOS/IOT) • A11 Radio X6 (IOS/IOT) • A11 Radio X7 (IOS/IOT) • A11 Radio X8 (IOS/IOT) • A11 Radio X9 (IOS/IOT) • A11 Radio X9 (U2K)
A14D	Seat Lumbar Support Pump - Driver	A2X	In the passenger compartment, left front, within driver seat	—	A14D Seat Lumbar Support Pump - Driver
A14P	Seat Lumbar Support Pump - Passenger	A7K	In the passenger compartment, right front, within passenger seat	—	A14P Seat Lumbar Support Pump - Passenger (A7K)
A16	Transfer Case Motor	NQF/NQH	Under the vehicle, mounted to the rear of the transfer case	—	• A16 Transfer Case Motor (NQF) • A16 Transfer Case Motor (NQH)
A22	Radio Controls	UIR	In the passenger compartment, at the center of the Instrument Panel, part of the Info Display Module	—	A22 Radio Controls (UIR)
A23D	Door Latch Assembly - Driver	—	In the driver door, at the rear center	Driver Door Components	A23D Door Latch Assembly - Driver
A23LR	Door Latch Assembly - Left Rear	Extended Cab/ Crew Cab	In the left rear door, at the rear center	Left Rear Door Components (Crew/Extended Cab)	A23LR Door Latch Assembly - Left Rear
A23P	Door Latch Assembly - Passenger	—	In the passenger door, at the rear center	Passenger Door Components	A23P Door Latch Assembly - Passenger
A23RR	Door Latch Assembly - Right Rear	Extended Cab/ Crew Cab	In the right rear door, at the rear center	Right Rear Door Components (Crew/ Extended Cab)	A23RR Door Latch Assembly - Right Rear
A24D	Door Handle Assembly - Driver Exterior	—	Outside of the vehicle, at the rear of the driver door	Driver Door Components	A24D Door Handle Assembly - Driver Exterior (BTM)
A24LR	Door Handle Assembly - Left Rear Exterior	Extended Cab/ Crew Cab	Outside of the vehicle, at the rear of the left rear door	Left Rear Door Components (Crew/Extended Cab)	A24LR Door Handle Assembly - Left Rear Exterior (BTM)

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
A24P	Door Handle Assembly - Passenger Exterior	—	Outside of the vehicle, at the rear of the passenger door	*Passenger Door Components*	*A24P Door Handle Assembly - Passenger Exterior (BTM)*
A24RR	Door Handle Assembly - Right Rear Exterior	Extended Cab/ Crew Cab	Outside of the vehicle, at the rear of the right rear door	*Right Rear Door Components (Crew/ Extended Cab)*	*A24RR Door Handle Assembly - Right Rear Exterior (BTM)*
A26	HVAC Controls	—	In the passenger compartment, at the center of the instrument panel, under P17 Info Display Module	*Instrument Panel - Left Front Components*	*A26 HVAC Controls*
A38	Reductant Pump and Sensor Assembly	L5P	Under the vehicle, mounted to the inboard side of the framee driver side, below the left rear of the cab	—	*A38 Reductant Pump and Sensor Assembly (L5P)*
A98	Front Overhead Console Assembly	—	In the passenger compartment, front center, mounted to headliner	*Headliner Components*	• *A98 Front Overhead Console Assembly X1* • *A98 Front Overhead Console Assembly X2*
A99C	Pickup Box Endgate Latch - Center	QK1+QT5	Mounter within endgate, at bottom of endgate	—	*A99C Pickup Box Endgate Latch - Center (QK1)*
A99L	Pickup Box Endgate Latch - Left	QK2/QT6	At the rear of the vehicle, within endgate, on the left side	• *Endgate Components (X88)* • *Endgate Components (Z88)*	*A99L Pickup Box Endgate Latch - Left (QT6)*
A99R	Pickup Box Endgate Latch - Right	QK2/QT6	At the rear of the vehicle, within endgate, on the right side	• *Endgate Components (X88)* • *Endgate Components (Z88)*	• *A99R Pickup Box Endgate Latch - Right (QK2)* • *A99R Pickup Box Endgate Latch - Right (QT6)*
A100L	Pickup Box Auxiliary Endgate Latch - Left	QK2	At the rear of the vehicle, within endgate, on the left side	*Endgate Components (Z88)*	*A100L Pickup Box Auxiliary Endgate Latch - Left (QK2/ QT5)*
A100R	Pickup Box Auxiliary Endgate Latch - Right	QK2	At the rear of the vehicle, within endgate, on the right side	*Endgate Components (Z88)*	*A100R Pickup Box Auxiliary Endgate Latch - Right (QK2/ QT5)*
B1	A/C Refrigerant Pressure Sensor	—	In the engine compartment, left front, mounted to A/C high pressure line, near G1 A/C Compressor	• *Engine Components - Left Front (L5P)* • *Engine Components - Right Front (L8T)*	*B1 A/C Refrigerant Pressure Sensor*
B5LF	Wheel Speed Sensor - Left Front	—	Outside the vehicle, mounted to the steering knuckle	*Underbody Components - Front*	*B5LF Wheel Speed Sensor - Left Front*
B5LR	Wheel Speed Sensor - Left Rear	—	Outside the vehicle, mounted to the outboard end of the left axle tube	*Rear Axle Components (DZW)*	*B5LR Wheel Speed Sensor - Left Rear*
B5RF	Wheel Speed Sensor - Right Front	—	Outside the vehicle, mounted to the steering knuckle	*Underbody Components - Front*	*B5RF Wheel Speed Sensor - Right Front*
B5RR	Wheel Speed Sensor - Right Rear	—	Outside the vehicle, mounted to the outboard end of the right axle tube	*Rear Axle Components (DZW)*	*B5RR Wheel Speed Sensor - Right Rear*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
B9D	Ambient Air Temperature Sensor - Mirror	—	Outside the vehicle, at the bottom of the passenger outside rearview mirror	*Right Side Mirror Components*	*B9D Ambient Air Temperature Sensor - Mirror*
B10B	Ambient Light/ Sunload Sensor	—	In the passenger compartment, at the top middle of the instrument panel	*Instrument Panel - Right Rear Components*	*B10B Ambient Light/ Sunload Sensor*
B12A	Transmission Fluid Pressure Switch	MYD	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	—
B12P	Automatic Transmission Fluid Pressure Sensor - Power Take-Off	PTO	In the engine compartment, mounted to sid of transmission	—	*B12P Automatic Transmission Fluid Pressure Sensor - Power Take-Off (PTO)*
B13	Transmission Fluid Temperature Sensor	MYD	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	*B13 Transmission Fluid Temperature Sensor (MGM/MGU)*
B14A	Transmission Output Shaft Speed Sensor	—	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	*B14A Transmission Output Shaft Speed Sensor (MGM/MGU)*
B14C	Transmission Input Shaft Speed Sensor	—	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	*B14C Transmission Input Shaft Speed Sensor (MGM/MGU)*
B14DA	Transmission Intermediate Speed Sensor 1	MGM/MGU	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	*B14DA Transmission Intermediate Speed Sensor 1 (MGM/ MGU)*
B14DB	Transmission Intermediate Speed Sensor 2	MGM/MGU	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	*B14DB Transmission Intermediate Speed Sensor 2 (MGM/ MGU)*
B15	Transmission Internal Mode Switch	MYD	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	—
B18	Battery Current Sensor	—	In the engine compartment, right rear, mounted by the negative battery cable	*Engine Compartment Components - Right Front*	*B18 Battery Current Sensor*
B20	Brake Fluid Level Switch	—	In the engine compartment, mounted in the brake fluid reservoir	*Engine Compartment Components - Left Side*	*B20 Brake Fluid Level Switch*
B22	Brake Pedal Position Sensor	—	In the passenger compartment, in the driver side footwell, under the instrument panel	*Instrument Panel - Behind Left Side Components*	*B22 Brake Pedal Position Sensor*
B23	Camshaft Position Sensor	—	In the engine compartment, front center, mounted to timing chain cover, above crankshaft harmonic balancer	—	*B23 Camshaft Position Sensor*
B24LF	Mobile Telephone Microphone - Left Front	—	In the passenger compartment, left front, attached to the headliner	*Headliner Components*	*B24LF Mobile Telephone Microphone - Left Front*
B24RF	Mobile Telephone Microphone - Right Front	IOS/IOT	In the passenger compartment, right front, attached to the headliner	*Headliner Components*	*B24RF Mobile Telephone Microphone - Right Front (IOS/IOT)*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
B26	Crankshaft Position Sensor	—	(L5P) In the engine compartment, left rear, mounted to rear of engine block, behind M64 Starter Motor (L8T) In the engine compartment, right rear, mounted to right rear side of engine block, behind M64 Starter Motor	*Engine Components - Right Front (2 of 2) (L5P)* *Engine Components - Right Rear (L8T)*	*B26 Crankshaft Position Sensor (L5P)* *B26 Crankshaft Position Sensor (L8T)*
B27D	Door Handle Switch - Driver Exterior	—	Outside of the vehicle, at the rear of the driver door, within A24D Door Handle Assembly - Driver Exterior	—	—
B27LR	Door Handle Switch - Left Rear Exterior	Extended Cab/ Crew Cab	Outside of the vehicle, at the rear of the left rear door, within A24LR Door Handle Assembly - Left Rear Exterior	—	—
B27P	Door Handle Switch - Passenger Exterior	—	Outside of the vehicle, at the rear of the passenger door, within A24P Door Handle Assembly - Passenger Exterior	—	—
B27RR	Door Handle Switch - Right Rear Exterior	Extended Cab/ Crew Cab	Outside of the vehicle, at the rear of the right rear door, within A24RR Door Handle Assembly - Right Rear Exterior	—	—
B33	Engine Coolant Level Switch	L5P	In the engine compartment, in the engine coolant reservoir	*Engine Compartment Components - Left Side*	*B33 Engine Coolant Level Switch (L5P)*
B34	Engine Coolant Temperature Sensor	—	(L8T) In the engine compartment, left front side of engine cylinder head (L5P) In the engine compartment, top left front of the engine, right of the water outlet housing	—	*B34 Engine Coolant Temperature Sensor (L5P)* *B34 Engine Coolant Temperature Sensor (L8T)*
B35	Engine Oil Level Switch	—	(L8T)In the engine compartment, mounted to the right side of the engine oil pan (L5P) In the engine compartment, mounted to the left side of the engine oil pan	*Engine Components - Left Front (L5P)* *Engine Components - Right Front (L8T)*	*B35 Engine Oil Level Switch (L5P)* *B35 Engine Oil Level Switch (L8T)*
B36	Engine Oil Temperature Sensor	L8T	In the engine compartment, left side, mounted to the engine oil filter housing	*Engine Components - Left Front (L8T)*	*B36 Engine Oil Temperature Sensor (L8T)*
B37B	Engine Oil Pressure Sensor	—	(L5P) In the engine compartment, front center, mounted to the left side of engine block (L8T) In the engine compartment, left side of engine, mounted above the engine oil filter	*Engine Components - Left Front (L5P)*	*B37B Engine Oil Pressure Sensor (L5P)* *B37B Engine Oil Pressure Sensor (L8T)*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
B39	A/C Evaporator Temperature Sensor	—	In the passenger compartment, behind the instrument panel, mounted in the HVAC housing	HVAC Components	B39 A/C Evaporator Temperature Sensor
B46A	Fuel Level Sensor - Primary	—	Under the vehicle, inside the primary fuel tank, part of the fuel pump and level sensor assembly	—	—
B46B	Fuel Level Sensor - Secondary	N2N	Under the vehicle, inside the secondary fuel tank, part of the fuel pump and level sensor assembly	—	—
B47	Fuel Pressure Sensor	—	• On the vehicle underbody, on the fuel line, near the transmission crossmember mount(Chassis Cab/ Crew Cab+L8T/L5P) • On the vehicle underbody, on the fuel line, mounted on top of tank (Crew Cab L8T/L5P)	• Underbody Components - Middle • Underbody Components - Right Rear (Chassis Cab)	• B47 Fuel Pressure Sensor (L5P) • B47 Fuel Pressure Sensor (L8T) • B47 Fuel Pressure Sensor (L8T-N2N)
B47B	Fuel Rail Pressure Sensor	L5P	In the engine compartment, at the top of the engine, mounted to the fuel rail	Engine Components - Right Front (2 of 2) (L5P)	B47B Fuel Rail Pressure Sensor (L5P)
B52C	Heated Oxygen Sensor - Bank 1 Sensor 1	L8T	Under the vehicle, mounted in the bank 1 exhaust, upstream of the catalytic converter	Engine Components - Rear of Engine (L8T)	B52C Heated Oxygen Sensor - Bank 1 Sensor 1 (L8T)
B52D	Heated Oxygen Sensor - Bank 1 Sensor 2	L8T	Under the vehicle, mounted in the bank 1 exhaust, downstream of the catalytic converter	Engine Components - Rear of Engine (L8T)	B52D Heated Oxygen Sensor - Bank 1 Sensor 2 (L8T)
B52E	Heated Oxygen Sensor - Bank 2 Sensor 1	L8T	Under the vehicle, mounted in the bank 2 exhaust, upstream of the catalytic converter	Engine Components - Rear of Engine (L8T)	B52E Heated Oxygen Sensor - Bank 2 Sensor 1 (L8T)
B52F	Heated Oxygen Sensor - Bank 2 Sensor 2	L8T	Under the vehicle, mounted in the bank 2 exhaust, downstream of the catalytic converter	Engine Components - Rear of Engine (L8T)	B52F Heated Oxygen Sensor - Bank 2 Sensor 2 (L8T)
B55	Engine Hood Switch	—	Outside the vehicle, at the front center of the hood, part of the hood latch assembly	—	B55 Engine Hood Switch
B59L	Front Impact Sensor - Left	—	In the engine compartment, left front, at the bottom of the radiator core support	—	B59L Front Impact Sensor - Left
B59R	Front Impact Sensor - Right	—	In the engine compartment, right front, at the bottom of the radiator core support	—	B59R Front Impact Sensor - Right
B61P	Seat Belt Tension Sensor - Passenger	—	In the passenger compartment, at the base of the B-pillar, part of the passenger seat belt retractor pretensioner	—	B61P Seat Belt Tension Sensor - Passenger
B62D	Seat Position Sensor - Driver	—	In the passenger compartment, mounted to the outboard track of the driver seat	—	B62D Seat Position Sensor - Driver

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
B63LF	Side Impact Sensor - Left Front	—	At the left front of the passenger compartment, mounted inside the left front door, at the bottom	Driver Door Components	B63LF Side Impact Sensor - Left Front
B63LR	Side Impact Sensor - Left Rear	Extended Cab/ Crew Cab	At the left rear of the passenger compartment, mounted inside the left rear door, at the bottom	Left Rear Door Components (Crew/Extended Cab)	B63LR Side Impact Sensor - Left Rear
B63RF	Side Impact Sensor - Right Front	—	At the right front of the passenger compartment, mounted inside the right front door, at the bottom	Passenger Door Components	B63RF Side Impact Sensor - Right Front
B63RR	Side Impact Sensor - Right Rear	Extended Cab/ Crew Cab	At the right rear of the passenger compartment, mounted inside the right rear door, at the bottom	Right Rear Door Components (Crew/ Extended Cab)	B63RR Side Impact Sensor - Right Rear
B65	Intake Manifold Pressure and Air Temperature Sensor	L5P	In the engine compartment, left side of engine, mounted to the intake manifold, at rear of engine	Engine Components - Right Rear (L5P)	B65 Intake Manifold Pressure and Air Temperature Sensor
B68A	Knock Sensor 1	L8T	In the engine compartment, left side of engine, mounted to the rear of the engine block, below exhaust manifold	Engine Components - Left Front (L8T)	B68A Knock Sensor 1 (L8T)
B68B	Knock Sensor 2	L8T	In the engine compartment, right rear, mounted to right rear side of engine block, behind M64 Starter Motor	Engine Components - Right Rear (L8T)	B68B Knock Sensor 2 (L8T)
B74	Manifold Absolute Pressure Sensor	L8T	In the engine compartment, front center, mounted to intake manifold, to the left of Q38 Throttle Body	Engine Components - Left Front (L8T)	• B74 Manifold Absolute Pressure Sensor (L5P) • B74 Manifold Absolute Pressure Sensor (L8T)
B75C	Multifunction Intake Air Sensor	—	Right front of the engine compartment, mounted in the air cleaner assembly	Engine Compartment Components - Right Front	• B75C Multifunction Intake Air Sensor (L5P) • B75C Multifunction Intake Air Sensor (L8T)
B81B	Park Position Switch	—	In the passenger compartment, left front, inside of S3 Transmission Shift Lever	—	—
B87	Rearview Camera	UVB/UVC/UV2/ UVI	Outside the vehicle, at the top middle of the tailgate, mounted in the tailgate handle	• Rear of Vehicle Components (X88) • Rear of Vehicle Components (Z88)	• B87 Rearview Camera (UVB) • B87 Rearview Camera (UVC +IOR) • B87 Rearview Camera (UVI/ UVS)
B87CA	Rearview Driver Information Camera - Cargo Area	UVI	In rear of vehicle, mounted to center hoigh mounted stop lamp	—	B87CA Rearview Driver Information Camera - Cargo Area X1 (UVI)
B88D	Seat Belt Switch - Driver	—	In the passenger compartment, at the inboard side of the driver seat, part of the seat belt buckle	—	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
B88P	Seat Belt Switch - Passenger	—	In the passenger compartment, at the inboard side of the passenger seat, part of the seat belt buckle	—	—
B99	Steering Wheel Angle Sensor	—	In the passenger compartment, near the base of the steering column, near the floor	*Steering Column Components*	*B99 Steering Wheel Angle Sensor*
B107	Accelerator Pedal Position Sensor	—	In the passenger compartment, in the driver side footwell, under the instrument panel	*Instrument Panel - Behind Left Side Components*	*B107 Accelerator Pedal Position Sensor*
B118B	Windshield Washer Fluid Level Switch	—	In the engine compartment, attached to the washer fluid reservoir, behind E13LA Headlamp Assembly - Left	*Engine Compartment Components - Left Side*	*B118B Windshield Washer Fluid Level Switch*
B130A	Exhaust Gas Recirculation Temperature Sensor 1	L5P	In the engine compartment, right front, mounted in exhaust, in front of B154 Diesel Particulate Filter Exhaust Differenial Pressure Sensor	*Engine Components - Right Front (1 of 2) (L5P)*	*B130A Exhaust Gas Recirculation Temperature Sensor 1*
B130B	Exhaust Gas Recirculation Temperature Sensor 2	L5P	In the engine compartment, right front, mounted in exhaust, near Q61 Reductant Injector	*Engine Components - Right Rear (L5P)*	*B130B Exhaust Gas Recirculation Temperature Sensor 2*
B131A	Exhaust Temperature Sensor 1	L5P	In the engine compartment, top of engine, mounted to turbo outlet pipe	*Engine Components - Right Rear (L5P)*	*B131A Exhaust Temperature Sensor 1*
B131B	Exhaust Temperature Sensor 2	L5P	In the engine compartment, on the right rear of the engine, mounted on top of the exhaust pipe	*Engine Components - Right Rear (L5P)*	*B131B Exhaust Temperature Sensor 2*
B131C	Exhaust Temperature Sensor 3	L5P	Under the vehicle, attached to the exhaust pipe, at the middle of the diesel particulate filter	• *Underbody Components - Middle* • *Underbody Components - Right Rear (Chassis Cab)*	*B131C Exhaust Temperature Sensor 3 (L5P)*
B131D	Exhaust Temperature Sensor 4	L5P	Under the vehicle, attached to the exhaust pipe, near the rear of the diesel particulate filter	• *Underbody Components - Middle* • *Underbody Components - Right Rear (Chassis Cab)*	*B131D Exhaust Temperature Sensor 4 (L5P)*
B131E	Exhaust Temperature Sensor 5	L5P	Under the vehicle, attached to the exhaust pipe, near the rear of the diesel particulate filter	• *Underbody Components - Middle* • *Underbody Components - Right Rear (Chassis Cab)*	*B131E Exhaust Temperature Sensor 5 (L5P)*
B136	Exhaust Particulate Matter Sensor	L5P	On the underbody, mounted to the inboard side of the right framee rail, forward of the right rear shock	• *Underbody Components - Middle* • *Underbody Components - Right Rear (Chassis Cab)*	*B136 Exhaust Particulate Matter Sensor (L5P)*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
B139	Transfer Case 2WD/4WD Actuator Position Sensor	NQH/NQF	Under the vehicle, mounted to the transfer case	—	• B139 Transfer Case 2WD/4WD Actuator Position Sensor (HQH) • B139 Transfer Case 2WD/4WD Actuator Position Sensor (NQH)
B150	Fuel Tank Pressure Sensor	L8T	Under the vehicle, at the top of the fuel tank	—	• B150 Fuel Tank Pressure Sensor (L8T+N2N) • B150 Fuel Tank Pressure Sensor (L8T-N2N)
B153D	Seat Belt Buckle - Driver	—	In the passenger compartment, at the inboard side of the drive seat	—	B153D Seat Belt Buckle - Driver
B153P	Seat Belt Buckle - Passenger	—	In the passenger compartment, at the inboard side of the passenger seat	—	B153P Seat Belt Buckle - Passenger
B154	Diesel Particulate Filter Exhaust Differential Pressure Sensor	L5P	On the underbody, mounted to the inboard side of the right framee rail, forward of the right rear shock	• Underbody Components - Middle • Underbody Components - Right Rear (Chassis Cab)	B154 Diesel Particulate Filter Exhaust Differential Pressure Sensor (L5P)
B172LF	Brake Pad Wear Sensor - Left Front	—	Under the vehicle, at left front caliper	Underbody Components - Front	B172LF Brake Pad Wear Sensor - Left Front
B172LR	Brake Pad Wear Sensor - Left Rear	—	Under the vehicle, at left rear caliper	Rear Axle Components (DZW)	B172LR Brake Pad Wear Sensor - Left Rear
B174G	Frontview Camera - Grille	UVS	At the front of the vehicle, near the grille	—	B174G Frontview Camera - Grille (UVI)
B174W	Frontview Camera - Windshield	UEU	In the passenger compartment, at the top middle of the windshield	Headliner Components	B174W Frontview Camera - Windshield (UEU/UHX)
B193A	Charge Air Cooler Inlet Temperature Sensor	L5P	In the engine compartment, mounted in the air inlet tube, near the air cleaner	Engine Components - Left Rear (L5P)	B193A Charge Air Cooler Inlet Temperature Sensor
B193B	Charge Air Cooler Outlet Temperature Sensor	L5P	In the engine compartment, mounted in the air inlet tube, near the throttle body	—	B193B Charge Air Cooler Outlet Temperature Sensor (L5P)
B194	Reductant Pressure Sensor	L5P	Internal to the reductant pump and sensor assembly	—	—
B195A	Nitrogen Oxides Sensor 1	L5P	In the engine compartment, attached to the exhaust pipe, on the top left rear side of the engine	Engine Components - Left Front (L5P)	B195A Nitrogen Oxides Sensor 1 (L5P)
B195B	Nitrogen Oxides Sensor 2	L5P	Under the vehicle, attached to the exhaust pipe, at the middle of the diesel particulate filter	• Underbody Components - Middle • Underbody Components - Right Rear (Chassis Cab)	B195B Nitrogen Oxides Sensor 2 (L5P)
B198	Fuel Composition Sensor	—	Under the vehicle, mounted to the left side of the frame	—	B198 Fuel Composition Sensor (FHS)
B212	Reductant Sensor Module	L5P	Internal to the reductant pump and sensor assembly	—	B212 Reductant Sensor Module (L5P)

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
B214	Reductant Temperature Sensor	L5P	Internal to the reductant pump and sensor assembly	—	—
B218L	Side Object Sensor Module - Left	UKC	Outside of the vehicle, left rear corner, mounted to the inside of the rear bumper	—	B218L Side Object Sensor Module - Left (UKC)
B218R	Side Object Sensor Module - Right	UKC	Outside of the vehicle, right rear corner, mounted to the inside of the rear bumper	—	B218R Side Object Sensor Module - Right (UKC)
B225L	Sideview Camera - Left	UVS	Outside of vehicle, left side, within A9A Outside Rearview Mirror - Driver	Left Side Mirror Components	—
B225R	Sideview Camera - Right	UVS	Outside of vehicle, right side, within A9B Outside Rearview Mirror - Passenger	Right Side Mirror Components	—
B302	Power Steering Pressure Sensor	NV8	In the passenger compartment, on the steering column near the base of the shifter	—	—
B303	Transmission Range Sensor	MGM/MGU	Under the vehicle, center, within T12 Automatic Transmission Assembly	—	B303 Transmission Range Sensor (MGM/MGU)
B306A	Parking Assist Sensor - Front Left Outer	UD5	At the front of the vehicle, left side, mounted in the front bumper	• Front of Vehicle Components (X88) • Front of Vehicle Components (Z88)	B306A Parking Assist Sensor - Front Left Outer (UD5)
B306B	Parking Assist Sensor - Front Left Middle	UD5	At the front of the vehicle, left of center, mounted in the front bumper	• Front of Vehicle Components (X88) • Front of Vehicle Components (Z88)	B306B Parking Assist Sensor - Front Left Middle (UD5)
B306C	Parking Assist Sensor - Front Right Middle	UD5	At the front of the vehicle, right of center, mounted in the front bumper	• Front of Vehicle Components (X88) • Front of Vehicle Components (Z88)	B306C Parking Assist Sensor - Front Right Middle (UD5)
B306D	Parking Assist Sensor - Front Right Outer	UD5	At the front of the vehicle, right side, mounted in the front bumper	• Front of Vehicle Components (X88) • Front of Vehicle Components (Z88)	B306D Parking Assist Sensor - Front Right Outer (UD5)
B306E	Parking Assist Sensor - Rear Left Outer	UD5/UD7	At the rear of the vehicle, left side, mounted in the rear bumper	• Rear of Vehicle Components (X88) • Rear of Vehicle Components (Z88)	B306E Parking Assist Sensor - Rear Left Outer (UD5/UD7)
B306F	Parking Assist Sensor - Rear Left Middle	UD5/UD7	At the rear of the vehicle, left of center, mounted in the rear bumper	• Rear of Vehicle Components (X88) • Rear of Vehicle Components (Z88)	B306F Parking Assist Sensor - Rear Left Middle (UD5/UD7)

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
B306G	Parking Assist Sensor - Rear Right Middle	UD5/UD7	At the rear of the vehicle, right of middle, mounted in the rear bumper	• Rear of Vehicle Components (X88) • Rear of Vehicle Components (Z88)	B306G Parking Assist Sensor - Rear Right Middle (UD5/UD7)
B306H	Parking Assist Sensor - Rear Right Outer	UD5/UD7	At the rear of the vehicle, right side, in the rear bumper	• Rear of Vehicle Components (X88) • Rear of Vehicle Components (Z88)	B306H Parking Assist Sensor - Rear Right Outer (UD5/UD7)
B310	Fuel Pressure/Temperature Sensor	L8T	In the engine compartment, rear center, under intake manifold, at the rear of the driver side fuel rail	—	B310 Fuel Pressure/Temperature Sensor (L8T)
B352	Video Display Inside Rearview Mirror Camera	DRZ	Outside the vehicle, at the top center of the rear window bridge, within E6 Center High Mounted Stop Lamp	—	—
C1	Battery	—	In the engine compartment, on the right side	—	—
C1B	Battery - Auxiliary	—	In the engine compartment, on the right side	—	—
E2A	Marker Lamp - Endgate	QT5/QT6	Outside the vehicle, in rear, mounted between the tailgate and rear bumper	Rear of Vehicle Components (DZW)	E2A Marker Lamp - Endgate
E2LF	Side Marker Lamp - Left Front	—	At the left front of vehicle, within E13LA Headlamp Assembly - Left	—	E2LF Side Marker Lamp - Left Front
E2LM	Side Marker Lamp - Left Middle	—	On driver side, in front side of driver outside rearview mirror	• Front of Vehicle Components (X88) • Front of Vehicle Components (Z88) • Left Side Mirror Components	—
E2LR	Side Marker Lamp - Left Rear	—	At the left rear of vehicle, within E42L Tail Lamp Assembly - Left	—	E2LR Side Marker Lamp - Left Rear (Z88)
E2RF	Side Marker Lamp - Right Front	—	At the right front of vehicle, within E13RA Headlamp Assembly - Right	—	E2RF Side Marker Lamp - Right Front
E2RM	Side Marker Lamp - Right Middle	—	On passenger side, in front side of passenger outside rearview mirror	• Front of Vehicle Components (X88) • Front of Vehicle Components (Z88) • Right Side Mirror Components	—
E2RR	Side Marker Lamp - Right Rear	—	At the right rear of vehicle, within E42R Tail Lamp Assembly - Right	—	E2RR Side Marker Lamp - Right Rear (Z88)

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
E3A	Roof Clearance Lamp - Left Front Outer	U01	Outside the vehicle, at the front of the roof	• *Front of Vehicle Components (X88)* • *Front of Vehicle Components (Z88)*	*E3A Roof Clearance Lamp - Left Front Outer*
E3C	Roof Clearance Lamp - Front Middle	U01	Outside the vehicle, at the front of the roof	• *Front of Vehicle Components (X88)* • *Front of Vehicle Components (Z88)*	*E3C Roof Clearance Lamp - Front Middle*
E3E	Roof Clearance Lamp - Right Front Outer	U01	Outside the vehicle, at the front of the roof	• *Front of Vehicle Components (X88)* • *Front of Vehicle Components (Z88)*	*E3E Roof Clearance Lamp - Right Front Outer*
E3LF	Rear Fender Clearance Lamp - Left Front	DZW	Outside the vehicle, on the left rear wheel fender flare	*Left Rear of Vehicle Components*	*E3LF Rear Fender Clearance Lamp - Left Front*
E3LR	Rear Fender Clearance Lamp - Left Rear	DZW	Outside the vehicle, on the left rear wheel fender flare	• *Left Rear of Vehicle Components* • *Rear of Vehicle Components (DZW)*	*E3LR Rear Fender Clearance Lamp - Left Rear*
E3RF	Rear Fender Clearance Lamp - Right Front	DZW	Outside the vehicle, on the right rear wheel fender flare	*Right Rear of Vehicle Components*	*E3RF Rear Fender Clearance Lamp - Right Front*
E3RR	Rear Fender Clearance Lamp - Right Rear	DZW	Outside the vehicle, on the right rear wheel fender flare	• *Rear of Vehicle Components (DZW)* • *Right Rear of Vehicle Components*	*E3RR Rear Fender Clearance Lamp - Right Rear*
E4C	Daytime Running Lamp - Left	—	At the front of vehicle, left front corner, within E13LA Headlamp Assembly - Left	—	—
E4D	Daytime Running Lamp - Right	—	At the front of vehicle, right front corner, within E13RA Headlamp Assembly - Right	—	—
E4E	Headlamp - Left High Beam	—	At the left front of vehicle, within E13LA Headlamp Assembly - Left	—	*E4E Headlamp - Left High Beam*
E4F	Headlamp - Right High Beam	—	At the right front of vehicle, within E13RA Headlamp Assembly - Right	—	*E4F Headlamp - Right High Beam*
E4G	Headlamp - Left Low Beam	—	At the left front of vehicle, within E13LA Headlamp Assembly - Left	—	*E4G Headlamp - Left Low Beam*
E4H	Headlamp - Right Low Beam	—	At the right front of vehicle, within E13RA Headlamp Assembly - Right	—	*E4H Headlamp - Right Low Beam*
E4LF	Turn Signal Lamp - Left Front	—	At the front of vehicle, left front corner, within E13LA Headlamp Assembly - Left	—	*E4LF Turn Signal Lamp - Left Front*
E4N	Park/Turn Signal Lamp - Left	—	At the left front of vehicle, within E13LA Headlamp Assembly - Left	—	*E4N Park/Turn Signal Lamp - Left*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
E4P	Park/Turn Signal Lamp - Right	—	At the right front of vehicle, within E13RA Headlamp Assembly - Right	—	E4P Park/Turn Signal Lamp - Right
E4RF	Turn Signal Lamp - Right Front	—	At the front of vehicle, right front corner, within E13RA Headlamp Assembly - Right	—	E4RF Turn Signal Lamp - Right Front
E4Y	Turn Signal Repeater Lamp - Left	DBG/DWI/DZC	Outside the vehicle, at the front of the driver door, on the outside rearview mirror	—	—
E4Z	Turn Signal Repeater Lamp - Right	DBG/DWI/DZC	Outside the vehicle, at the front of the passenger door, on the outside rearview mirror	—	—
E5A	Backup Lamp - Left	—	At the rear of vehicle, left lower corner, within E42L Taillamp Assembly - Left	• Rear of Vehicle Components (X88) • Rear of Vehicle Components (Z88)	E5A Backup Lamp - Left
E5AG	Tail/Stop and Turn Signal Lamp - Left Upper	—	At the left rear of vehicle, within E42L Tail Lamp Assembly - Left	—	—
E5AH	Tail/Stop and Turn Signal Lamp - Right Upper	—	At the right rear of vehicle, within E42R Tail Lamp Assembly - Right	—	—
E5AM	Stop/Turn Signal Lamp - Left	—	At the rear of vehicle, left rear corner, within E42L Taillamp Assembly - Left	—	—
E5AN	Stop/Turn Signal Lamp - Right	—	At the rear of vehicle, right rear corner, within E42R Taillamp Assembly - Right	—	—
E5AU	Stop/Turn Signal Lamp - Right Upper	—	At the rear of the vehicle, right rear, within E42R Tail Lamp Assembly - Right	—	—
E5B	Backup Lamp - Right	—	At the rear of vehicle, right lower corner, within E42R Taillamp Assembly - Right	• Rear of Vehicle Components (X88) • Rear of Vehicle Components (Z88)	E5B Backup Lamp - Right
E5E	Tail Lamp - Left	—	At the rear of vehicle, left rear corner, within E42L Taillamp Assembly - Left	—	—
E5F	Tail Lamp - Right	—	At the rear of vehicle, right rear corner, within E42R Taillamp Assembly - Right	—	E5F Tail Lamp - Right
E5S	Tail/Stop and Turn Signal Lamp - Left	—	At the left rear of vehicle, within E42L Tail Lamp Assembly - Left	—	—
E5T	Tail/Stop and Turn Signal Lamp - Right	—	At the right rear of vehicle, within E42R Tail Lamp Assembly - Right	—	—
E5U	Tail/Stop and Turn Signal Lamp - Left Lower	—	At the left rear of vehicle, within E42L Tail Lamp Assembly - Left	—	—
E5V	Tail/Stop and Turn Signal Lamp - Right Lower	—	At the right rear of vehicle, within E42R Tail Lamp Assembly - Right	—	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
E6	Center High Mounted Stop Lamp	—	Outside the vehicle, at the top center of the rear window bridge	—	• E6 Center High Mounted Stop Lamp (Crew Cab/ Extended Cab) • E6 Center High Mounted Stop Lamp (Regular Cab)
E7	License Plate Lamp	ZW9	At the rear of the vehicle, mounted in the middle of the rear bumper	—	E7 License Plate Lamp (ZW9)
E7L	License Plate Lamp - Left	E63	Outside the vehicle, mounted in the middle of the rear bumper	• Rear of Vehicle Components (X88) • Rear of Vehicle Components (Z88)	E7L License Plate Lamp - Left (E63)
E7R	License Plate Lamp - Right	E63	Outside the vehicle, mounted in the middle of the rear bumper	• Rear of Vehicle Components (X88) • Rear of Vehicle Components (Z88)	E7R License Plate Lamp - Right (E63)
E8L	Liftgate Courtesy Lamp	QT5/QT6	Rear of vehicle, mounted to endgate latch control	• Rear of Vehicle Components (X88) • Rear of Vehicle Components (Z88)	E8L Liftgate Courtesy Lamp (QT5/QT6)
E11A	Fuel Heater/Water in Fuel Sensor	L5P	Under the vehicle, mounted to the bracket above the spare tire	• Underbody Components - Middle • Underbody Components - Right Rear (Chassis Cab)	E11A Fuel Heater/ Water in Fuel Sensor (L5P)
E12A	Glow Plug 1	L5P	In the engine compartment, In the cylinder head at cylinder 1	Engine Components - Right Front (1 of 2) (L5P)	E12A Glow Plug 1
E12B	Glow Plug 2	L5P	In the engine compartment, In the cylinder head at cylinder 2	Engine Components - Left Rear (L5P)	E12B Glow Plug 2
E12C	Glow Plug 3	L5P	In the engine compartment, In the cylinder head at cylinder 3	—	E12C Glow Plug 3
E12D	Glow Plug 4	L5P	In the engine compartment, In the cylinder head at cylinder 4	Engine Components - Left Rear (L5P)	E12D Glow Plug 4
E12E	Glow Plug 5	L5P	In the engine compartment, In the cylinder head at cylinder 5	Engine Components - Right Rear (L5P)	E12E Glow Plug 5
E12F	Glow Plug 6	L5P	In the engine compartment, In the cylinder head at cylinder 6	Engine Components - Left Rear (L5P)	E12F Glow Plug 6
E12G	Glow Plug 7	L5P	In the engine compartment, In the cylinder head at cylinder 7	Engine Components - Right Rear (L5P)	E12G Glow Plug 7
E12H	Glow Plug 8	L5P	In the engine compartment, In the cylinder head at cylinder 8	Engine Components - Left Rear (L5P)	E12H Glow Plug 8

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
E13L	Headlamp - Left	—	At the front of the vehicle, within E13LA Headlamp Assembly - Left	—	—
E13LA	Headlamp Assembly - Left	—	At the front of the vehicle, within E13LA Headlamp Assembly - Left	- *Front of Vehicle Components (X88)* - *Front of Vehicle Components (Z88)*	—
E13R	Headlamp - Right	—	At the front of vehicle, within E13RA Headlamp Assembly - Right	—	—
E13RA	Headlamp Assembly - Right	—	At the front of vehicle, within E13RA Headlamp Assembly - Right	- *Front of Vehicle Components (X88)* - *Front of Vehicle Components (Z88)*	—
E14A	Seat Heating Element - Driver Back	KA1	In the passenger compartment, in the driver seat back	—	*E14A Seat Heating Element - Driver Back*
E14B	Seat Heating Element - Driver Cushion	KA1	In the passenger compartment, in the driver seat cushion	—	*E14B Seat Heating Element - Driver Cushion*
E14C	Seat Heating Element - Passenger Back	KA1	In the passenger compartment, in the passenger seat back	—	*E14C Seat Heating Element - Passenger Back (KA1)*
E14D	Seat Heating Element - Passenger Cushion	KA1	In the passenger compartment, in the passenger seat cushion	—	*E14D Seat Heating Element - Passenger Cushion (KA1)*
E14F	Seat Heating Element - Left Rear Cushion	KA6	In the passenger compartment, in the left rear seat cushion	—	*E14F Seat Heating Element - Left Rear Cushion (KA6)*
E14H	Seat Heating Element - Right Rear Cushion	KA6	In the passenger compartment, in the right rear seat cushion	—	*E14H Seat Heating Element - Right Rear Cushion (KA6)*
E15	Steering Wheel Heater	KI3	In the passenger compartment, part of the steering wheel	—	—
E17D	Outside Rearview Mirror Glass - Driver	DLF/UKC	Outside the vehicle, at the front of the driver door, part of A9A Outside Rearview Mirror - Driver	—	*E17D Outside Rearview Mirror Glass - Driver*
E17P	Outside Rearview Mirror Glass - Passenger	DLF/UKC	Outside the vehicle, at the front of the passenger door, part of A9B Outside Rearview Mirror - Passenger	—	*E17P Outside Rearview Mirror Glass - Passenger*
E18	Rear Defogger Grid	C49	At the rear of the passenger compartment, part of the rear window glass	- *Left Rear Passenger Compartment Components* - *Right Rear Passenger Compartment Components*	- *E18 Rear Defogger Grid X1 (C49)* - *E18 Rear Defogger Grid X2 (C49)*
E28	Center Console Compartment Lamp	D07	In the passenger compartment, between the front seats, inside the floor console storage bin	*Center Console Components (2 of 3)*	*E28 Center Console Compartment Lamp (D07)*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
E29LF	Fog Lamp - Left Front	T3U	Outside the vehicle, at the left front corner, in the front bumper, below E13LA Headlight Assembly - Left	• Front of Vehicle Components (X88) • Front of Vehicle Components (Z88)	E29LF Fog Lamp - Left Front (T3U)
E29RF	Fog Lamp - Right Front	T3U	Outside the vehicle, at the right front corner, in the front bumper, below E13RA Headlamp Assembly - Right	• Front of Vehicle Components (X88) • Front of Vehicle Components (Z88)	E29RF Fog Lamp - Right Front (T3U)
E31L	Sunshade Mirror Lamp - Left	DH6	In the passenger compartment, at the left front of the headliner, part of A3L Sunshade - Left	Headliner Components	E31L Sunshade Mirror Lamp - Left (DH6)
E31R	Sunshade Mirror Lamp - Right	DH6	In the passenger compartment, at the right front of the headliner, part of A3R Sunshade - Right	Headliner Components	E31R Sunshade Mirror Lamp - Right (DH6)
E33L	Cargo Lamp - Left	UF2	Outside the vehicle, beneath the top of the left side of the bed left rear	Right Rear of Vehicle Components	E33L Cargo Lamp - Left
E33R	Cargo Lamp - Right	UF3	Outside the vehicle, beneath the top of the right side of the bed right rear	Left Rear of Vehicle Components	E33R Cargo Lamp - Right
E37B	Dome/Reading Lamps - 2nd Row	Extended Cab/ Crew Cab	In the passenger compartment, near the center of the headliner	Headliner Components	E37B Dome/Reading Lamps - 2nd Row
E40	Electrical Auxiliary Heater	C32	In the passenger compartment, at the top of the HVAC box	HVAC Components	• E40 Electrical Auxiliary Heater X1 (C32) • E40 Electrical Auxiliary Heater X2 (C32)
E42L	Tail Lamp Assembly - Left	—	Outside the vehicle, at the left rear corner of the vehicle	• Rear of Vehicle Components (X88) • Rear of Vehicle Components (Z88)	—
E42R	Tail Lamp Assembly - Right	—	Outside the vehicle, at the right rear corner of the vehicle	• Rear of Vehicle Components (X88) • Rear of Vehicle Components (Z88)	—
E52	Reductant Line Heater	L5P	Internal to the reductant pump and sensor assembly	—	E52 Reductant Line Heater (L5P)
E53	Reductant Tank Heater	L5P	Internal to the reductant pump and sensor assembly	Underbody Components - DEF Tank (L5P)	—
E63D	Flood Lamp - Driver Door Handle	AU3	In the passenger compartment, in the driver door handle trim panel	—	E63D Flood Lamp - Driver Door Handle (AU3)
E63P	Flood Lamp - Passenger Door Handle	AU3	In the passenger compartment, in the passenger door handle trim panel	—	E63P Flood Lamp - Passenger Door Handle (AU3)

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
E70D	Outside Rearview Mirror Cargo Lamp - Driver	DWI/DZC	Side of vehicle, mounted to driver outside rearview mirror	Left Side Mirror Components	E70D Outside Rearview Mirror Cargo Lamp - Driver
E70P	Outside Rearview Mirror Cargo Lamp - Passenger	DWI/DZC	Side of vehicle, mounted to passenger outside rearview mirror	Right Side Mirror Components	E70P Outside Rearview Mirror Cargo Lamp - Passenger
E90DF	Exterior Flood Lamp - Driver Outside Rearview Mirror Forward	DEZ/DLF	Outside of the vehicle, at the front of A9A Outside Rearview Mirror - Driver	• Front of Vehicle Components (X88) • Front of Vehicle Components (Z88) • Left Side Mirror Components	E90DF Exterior Flood Lamp - Driver Outside Rearview Mirror Forward
E90DL	Exterior Flood Lamp - Driver Outside Rearview Mirror Lower	DEZ	Outside of the vehicle, at the bottom of A9A Outside Rearview Mirror - Driver	Left Side Mirror Components	—
E90PF	Exterior Flood Lamp - Passenger Outside Rearview Mirror Forward	DEZ/DLF	Outside of the vehicle, at the front of A9B Outside Rearview Mirror - Passenger	• Front of Vehicle Components (X88) • Front of Vehicle Components (Z88) • Right Side Mirror Components	—
E90PL	Exterior Flood Lamp - Passenger Outside Rearview Mirror Lower	DEZ	Outside of the vehicle, at the bottom of A9B Outside Rearview Mirror - Passenger	Right Side Mirror Components	—
E95FL	Front Side Marker Lamp - Left Fender	Z88	Mounted within left front fender, mounted in center	Front of Vehicle Components (Z88)	—
E95FR	Front Side Marker Lamp - Right Fender	Z88	Mounted within right front fender, mounted in center	Front of Vehicle Components (Z88)	—
E96FL	Rear Side Marker Lamp - Left Fender	Z88	Mounted within rear fender, left rear center	Left Rear of Vehicle Components	—
E96FR	Rear Side Marker Lamp - Right Fender	Z88	Mounted within rear fender, right rear center	Right Rear of Vehicle Components	—
F101	Passenger Instrument Panel Air Bag	—	In the passenger compartment, behind the instrument panel upper glove box	Instrument Panel - Right Rear Components	• F101 Passenger Instrument Panel Air Bag X1 • F101 Passenger Instrument Panel Air Bag X2
F105L	Roof Rail Air Bag - Left	—	In the passenger compartment, along the left side of the headliner	Left Rear Passenger Compartment Components	F105L Roof Rail Air Bag - Left
F105R	Roof Rail Air Bag - Right	—	In the passenger compartment, along the right side of the headliner	Right Rear Passenger Compartment Components	F105R Roof Rail Air Bag - Right
F106D	Seat Side Air Bag - Driver	—	In the passenger compartment, in the outboard side of the driver seat back	—	F106D Seat Side Air Bag - Driver
F106P	Seat Side Air Bag - Passenger	—	In the passenger compartment, in the outboard side of the passenger seat back	—	F106P Seat Side Air Bag - Passenger

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
F107	Steering Wheel Air Bag	—	In the passenger compartment, mounted to the middle of the steeing wheel	—	• F107 Steering Wheel Air Bag X1 • F107 Steering Wheel Air Bag X2
F112D	Seat Belt Retractor Pretensioner - Driver	—	In the passenger compartment, at the base of the driver side B-pillar	—	F112D Seat Belt Retractor Pretensioner - Driver
F112P	Seat Belt Retractor Pretensioner - Passenger	—	In the passenger compartment, at the base of the passenger side B-pillar	—	F112P Seat Belt Retractor Pretensioner - Passenger
F113D	Seat Belt Anchor Pretensioner - Driver	—	In the passenger compartment, mounted to the outboard driver seat track	Left Rear Passenger Compartment Components	F113D Seat Belt Anchor Pretensioner - Driver
F113P	Seat Belt Anchor Pretensioner - Passenger	—	In the passenger compartment, mounted to the outboard passenger seat track	Right Middle Passenger Compartment Components	F113P Seat Belt Anchor Pretensioner - Passenger
G1	A/C Compressor	—	In the engine compartment, right front, mounted to the top of the engine	—	—
G12	Fuel Pump	—	Under the vehicle, within the fuel tank, part of A6C Fuel Pump and Level Sender Assembly	—	—
G12B	Fuel Pump - Secondary	N2N	Under the vehicle, left side of the rear fuel tank, mounted to the frame on the outside	—	—
G13	Generator	—	In the engine compartment, right front, mounted to the right upper side of the engine	• Engine Components - Left Front (L5P) • Engine Components - Left Front (L8T)	• G13 Generator X1 • G13 Generator X2 (VYU)
G13E	Generator - Auxiliary	KHF/VYU	In the engine compartment, right front, mounted to the right upper side of the engine	Engine Compartment Components - Left Front Snow Plow (VYU)	• G13E Generator - Auxiliary X1 (VYU) • G13E Generator - Auxiliary X2 (KHF)
G18	High Pressure Fuel Pump	L8T	Under hood, mounted to top on engine	—	G18 High Pressure Fuel Pump
G24	Windshield Washer Pump	—	In the engine compartment, attached to the washer fluid reservoir, behind E13LA Headlamp Assembly - Left	Engine Compartment Components - Left Side	G24 Windshield Washer Pump
G33	Reductant Pump	L5P	Internal to the reductant pump and sensor assembly	Underbody Components - DEF Tank (L5P)	—
K4	Assist Step Control Module	—	Underneath the vehicle, along the outside of the left frame rail, beneath left rear door	—	• K4 Assist Step Control Module X1 (BRS) • K4 Assist Step Control Module X2 (BRS)

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
K9	Body Control Module	—	In the passenger compartment, behind the driver side of the instrument panel, outboard of the steering column	Instrument Panel - Left Rear Components	• K9 Body Control Module X1 • K9 Body Control Module X2 • K9 Body Control Module X3 • K9 Body Control Module X4 • K9 Body Control Module X5 • K9 Body Control Module X6 • K9 Body Control Module X7
K17	Electronic Brake Control Module	—	In the engine compartment, left rear, mounted behind X50A Underhood Fuse Block	Engine Compartment Components - Left Rear	K17 Electronic Brake Control Module
K20	Engine Control Module	—	In the engine compartment, left front, behind E13LA Headlamp Assembly - Left	Engine Compartment Components - Left Side	• K20 Engine Control Module X1 (L5P) • K20 Engine Control Module X2 (L5P) • K20 Engine Control Module X3 (L5P) • K20 Engine Control Module X1 (L8T) • K20 Engine Control Module X2 (L8T) • K20 Engine Control Module X3 (L8T)
K22	Cooling Fan Control Module	—	In the engine compartment, left front by the Headlamp Assembly.	—	K22 Cooling Fan Control Module
K29F	Seat Heating Control Module - Front	KA1	In the passenger compartment, right front, under the front of the passenger seat	—	• K29F Seat Heating Control Module - Front X1 (KA1) • K29F Seat Heating Control Module - Front X1 (KA6) • K29F Seat Heating Control Module - Front X2 (KA1) • K29F Seat Heating Control Module - Front X2 (KA6)

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
K29R	Seat Heating Control Module - Rear	KA6	In the passenger compartment, rear center, underneath the front of the rear seat cushion	—	• K29R Seat Heating Control Module - Rear X1 (KA6) • K29R Seat Heating Control Module - Rear X2 (KA6)
K32	Steering Wheel Heating Control Module	KI3	In the passenger compartment, in the steering wheel, behind the driver air bag	—	• K32 Steering Wheel Heating Control Module X1 (KI3) • K32 Steering Wheel Heating Control Module X2 (KI3)
K33	HVAC Control Module	—	In the passenger compartment, left front, between the instrument panel and bulkhead	Instrument Panel - Left Rear Components	• K33 HVAC Control Module X1 • K33 HVAC Control Module X2 • K33 HVAC Control Module X3 • K33 HVAC Control Module X4
K34	Glow Plug Control Module	L5P	In the engine compartment, mounted to the top of the engine	Engine Components - Right Front (1 of 2) (L5P)	• K34 Glow Plug Control Module X1 (L5P) • K34 Glow Plug Control Module X2
K36	Inflatable Restraint Sensing and Diagnostic Module	—	In the passenger compartment, bolted to the floor between the front seats or under console if equipped	Right Middle Passenger Compartment Components	• K36 Inflatable Restraint Sensing and Diagnostic Module X1 • K36 Inflatable Restraint Sensing and Diagnostic Module X2
K38A	Chassis Control Module - Auxiliary	—	• (Non Chassis Cab) Under the vehicle, mounted to the bracket above the spare tire • (Chassis Cab) Under the vehicle, mounted to rear frame cross member	• Underbody Components - Left Rear • Underbody Components - Left Rear (Chassis Cab)	• K38A Chassis Control Module - Auxiliary (L5P +N2N) • K38A Chassis Control Module - Auxiliary (-N2N)
K40	Seat Memory Control Module	A45	In the passenger compartment, under the driver seat	—	• K40 Seat Memory Control Module X1 • K40 Seat Memory Control Module X2 • K40 Seat Memory Control Module X3 • K40 Seat Memory Control Module X5 • K40 Seat Memory Control Module X6

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
K43	Power Steering Control Module	—	Under the vehicle, part of the steering gear assembly	*Engine Compartment Components - Left Front*	• *K43 Power Steering Control Module X1 (NV8)* • *K43 Power Steering Control Module X3 (NV8)*
K44	Power Take-Off Control Module	PTO	Under the vehicle, mounted to the left side frame rail, before transmission cross member support	—	• *K44 Power Take--Off Control Module X1 (PTO)* • *K44 Power Take--Off Control Module X2 (PTO)*
K56	Serial Data Gateway Module	—	In the passenger compartment, left front, between the instrument panel and bulkhead	*Instrument Panel - Left Rear Components*	• *K56 Serial Data Gateway Module X1* • *K56 Serial Data Gateway Module X2*
K60	Steering Column Lock Module	BTM	In the passenger compartment, left front, mounted on top of the steering column, underneath instrument panel	*Steering Column Components*	*K60 Steering Column Lock Module (BTM)*
K68	Trailer Lighting Control Module	—	Under the rear of the vehicle, near spare tire	—	*K68 Trailer Lighting Control Module (U1D)*
K69	Transfer Case Control Module	NQF/NQH	In the engine compartment, left front, behind E13LA Headlamp Assembly - Left	*Engine Compartment Components - Left Side*	*K69 Transfer Case Control Module (NQF/NQH)*
K71	Transmission Control Module	—	• (MGM/MGU) In the engine compartment, left front, behind left corner of the radiator • (MYD) In the engine compartment, inside the T12 Automatic Transmission Assembly, part of the control solenoid valve Assembly	• *Engine Compartment Components - Left Side* • *Engine Components - Rear of Engine (L8T)*	*K71 Transmission Control Module (MGM/MGU)*
K73	Telematics Communication Interface Control Module	UE1	In the passenger compartment, left front, between the instrument panel and bulkhead	—	• *K73 Telematics Communication Interface Control Module X1* • *K73 Telematics Communication Interface Control Module X5* • *K73 Telematics Communication Interface Control Module X7*
K77	Remote Control Door Lock Receiver	AQQ	• (Early Production) In the passenger compartment, right rear corner, below headliner • (Middle/Late Production) In the passenger compartment, left rear corner, below headliner	• *Left Rear Passenger Compartment Components* • *Right Rear Passenger Compartment Components*	*K77 Remote Control Door Lock Receiver (AQQ)*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
K84	Keyless Entry Control Module	BTM	In the passenger compartment, left front, between the instrument panel and bulkhead	*Instrument Panel - Behind Left Side Components*	• *K84 Keyless Entry Control Module X1 (BTM)* • *K84 Keyless Entry Control Module X2 (BTM)*
K85	Passenger Presence Module	—	In the passenger compartment, in the passenger seat cushion	—	*K85 Passenger Presence Module*
K89	Immobilizer Control Module	—	• (-BTM) In the passenger compartment, on the left side of the steering column, below S78 Turn Signal/Multifunction Switch • (BTM) In the passenger compartment, floor console, blow cup holder assembly	*Center Console Components (3 of 3)*	• *K89 Immobilizer Control Module (-BTM)* • *K89 Immobilizer Control Module (BTM+D07)* • *K89 Immobilizer Control Module (BTM-D07)*
K111	Fuel Pump Driver Control Module	—	• (Non Chassis Cab) Under the vehicle, mounted to the bracket above the spare tire • (Chassis Cab) Under the vehicle, mounted to rear frame cross member	*Underbody Components - Left Rear*	• *K111 Fuel Pump Driver Control Module ((L5P/L8T)-N2N)* • *K111 Fuel Pump Driver Control Module (L5P+N2N)* • *K111 Fuel Pump Driver Control Module (L5P-N2N)* • *K111 Fuel Pump Driver Control Module (L8T+N2N)* • *K111 Fuel Pump Driver Control Module (L8T-N2N)*
K115	Reductant Control Module	L5P	Under the vehicle, below passenger cab, mounted to the top of the DEF tank	*Underbody Components - Right Rear (Chassis Cab)*	*K115 Reductant Control Module (L5P)*
K133	Trailer Brake Power Control Module	JL1	• (Non Chassis Cab) Under the vehicle, mounted to the bracket above the spare tire • (Chassis Cab) Under the vehicle, mounted to rear frame cross member	• *Underbody Components - Left Rear* • *Underbody Components - Left Rear (Chassis Cab)*	*K133 Trailer Brake Power Control Module (JL1)*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
K157	Video Processing Control Module	UVI/UV2/UVS	In the passenger compartment, right rear, mounted behind the rear seat, below the rear window	Right Rear Passenger Compartment Components	- K157 Video Processing Control Module X1 (UVI) - K157 Video Processing Control Module X1 (UVS) - K157 Video Processing Control Module X3 (UVI) - K157 Video Processing Control Module X3 (UVS) - K157 Video Processing Control Module X4 (UVI) - K157 Video Processing Control Module X4 (UVS) - K157 Video Processing Control Module X5 (UVS) - K157 Video Processing Control Module X6 (UVS) - K157 Video Processing Control Module X7 (UVS)
K166L	Multifunction LED Control Module - Left Headlamp	—	At the left front of vehicle, bottom of E13LA Headlamp Assembly - Left	—	—
K166R	Multifunction LED Control Module - Right Headlamp	—	At the right front of vehicle, bottom of E13RA Headlamp Assembly - Right	—	—
K182	Parking Assist Control Module	UD5/UD7	In the passenger compartment, mounted to the driver side of the rear wall	Left Rear Passenger Compartment Components	- K182 Parking Assist Control Module X1 (UD5/UD7) - K182 Parking Assist Control Module X2 (UD5/UD7) - K182 Parking Assist Control Module X3 (UD5/UD7)
K194	Rear Gate Module	QT6	At the rear of the vehicle, inside of the endgate, behind trim panel, upper left side	Endgate Components (X88)	K194 Rear Gate Module (QT6)
K214	Trailer Tire Pressure Indicator Module	PTT	At the rear of the vehicle, mounted to the center of the rear bumper, near X88 Trailer Connector	—	K214 Trailer Tire Pressure Indicator Module (PTT)
M4	Air Inlet Door Actuator	—	In the passenger compartment, behind the instrument panel glove box	HVAC Components	M4 Air Inlet Door Actuator
M6L	Air Temperature Door Actuator - Left	—	In the passenger compartment, part of HVAC module, behind the instrument panel	HVAC Components	M6L Air Temperature Door Actuator - Left
M6R	Air Temperature Door Actuator - Right	CJ2	In the passenger compartment, part of HVAC module, behind the instrument panel	—	M6R Air Temperature Door Actuator - Right (CJ2)

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
M7	Transmission Shift Lock Control Solenoid Actuator	—	In the passenger compartment, right side of the steering wheel, attached to transmission shift lever	—	—
M8	Blower Motor	—	In the passenger compartment, under the right side of the instrument panel, above the hush panel	*HVAC Components*	*M8 Blower Motor*
M10	Charge Air Cooler Coolant Pump	L5P	Under the vehicle, on the inboard of the driver side frame rail.	—	*M10 Charge Air Cooler Coolant Pump (L5P)*
M26	Front Axle Engagement Actuator	—	Under the vehicle, mounted to the front axle	*Underbody Components - Front*	*M26 Front Axle Engagement Actuator (NQF/NQH)*
M37	Mode Door Actuator	—	In the passenger compartment, right front, within instrument panel, attached to HVAC assembly	*HVAC Components*	*M37 Mode Door Actuator*
M50D	Seat Front Vertical Motor - Driver	A45	In the passenger compartment, under the driver seat	—	*M50D Seat Front Vertical Motor - Driver*
M50P	Seat Front Vertical Motor - Passenger	A7K	In the passenger compartment, under the passenger seat	—	*M50P Seat Front Vertical Motor - Passenger (A7K)*
M51D	Seat Horizontal Motor - Driver	A45	In the passenger compartment, under the driver seat	—	*M51D Seat Horizontal Motor - Driver*
M51P	Seat Horizontal Motor - Passenger	A7K	In the passenger compartment, under the passenger seat	—	*M51P Seat Horizontal Motor - Passenger (A7K)*
M55D	Seat Rear Vertical Motor - Driver	A45	In the passenger compartment, under the driver seat	—	*M55D Seat Rear Vertical Motor - Driver*
M55P	Seat Rear Vertical Motor - Passenger	A7K	In the passenger compartment, under the passenger seat	—	*M55P Seat Rear Vertical Motor - Passenger (A7K)*
M56D	Seat Recline Motor - Driver	A45	In the passenger compartment, in the driver seat back	—	*M56D Seat Recline Motor - Driver*
M56P	Seat Recline Motor - Passenger	A7K	In the passenger compartment, in the passenger seat back	—	*M56P Seat Recline Motor - Passenger (A7L)*
M63	Sliding Rear Window Motor	A48	In the passenger compartment, mounted to the passenger side of the rear wall, behind the rear seat	*Right Rear Passenger Compartment Components*	*M63 Sliding Rear Window Motor (A48)*
M64	Starter Motor	—	In the engine compartment, right rear, mounted to rear of engine block	• *Engine Components - Right Front (2 of 2) (L5P)* • *Engine Components - Right Front (L8T)*	• *M64 Starter Motor X1* • *M64 Starter Motor X2*
M69	Sunroof Motor	CF5	In the passenger compartment, at the front of the roof, above the headliner	*Sunroof Components (CF5)*	*M69 Sunroof Motor (CF5)*
M72	Variable Power Steering Solenoid Valve	NV8	In the passenger compartment, on the steering column near the base of the shifter	—	—
M73A	Seat Blower Motor - Driver Back	KQV	In the passenger compartment, in the driver seat back	—	*M73A Seat Blower Motor - Driver Back*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
M73B	Seat Blower Motor - Passenger Back	KQV	In the passenger compartment, in the passenger seat cback	—	*M73B Seat Blower Motor - Passenger Back (KQV)*
M73C	Seat Blower Motor - Driver Cushion	KQV	In the passenger compartment, in the driver seat cushion	—	*M73C Seat Blower Motor - Driver Cushion*
M73D	Seat Blower Motor - Passenger Cushion	KQV	In the passenger compartment, in the passenger seat cushion	—	*M73D Seat Blower Motor - Passenger Cushion (KQV)*
M74D	Window Motor - Driver	—	In the passenger compartment, in the driver door	*Driver Door Components*	*M74D Window Motor - Driver (AXG)*
M74LR	Window Motor - Left Rear	Extended Cab/ Crew Cab	In the passenger compartment, in the left rear door	*Left Rear Door Components (Crew/Extended Cab)*	*M74LR Window Motor - Left Rear (AEQ)*
M74P	Window Motor - Passenger	—	In the passenger compartment, in the passenger door	*Passenger Door Components*	• *M74P Window Motor - Passenger (AED)* • *M74P Window Motor - Passenger (AEF)*
M74RR	Window Motor - Right Rear	Extended Cab/ Crew Cab	In the passenger compartment, in the right rear door	*Right Rear Door Components (Crew/ Extended Cab)*	*M74RR Window Motor - Right Rear*
M75	Windshield Wiper Motor	—	Outside the vehicle, at the left rear of the engine compartment, below the left lower corner of the windshield	*Engine Compartment Components - Left Side*	*M75 Windshield Wiper Motor*
M77D	Outside Rearview Mirror Motor - Driver	A45	Outside the vehicle, at the front of the driver door, within the A9A Outside Rearview Mirror - Driver	—	*M77D Outside Rearview Mirror Motor - Driver*
M77P	Outside Rearview Mirror Motor - Passenger	A45	Outside the vehicle, at the front of the passenger door, within the A9B Outside Rearview Mirror - Passenger	—	*M77P Outside Rearview Mirror Motor - Passenger*
M78D	Outside Rearview Mirror Folding Motor - Driver	AXG	Outside the vehicle, at the front of the driver door, within the A9A Outside Rearview Mirror - Driver	—	*M78D Outside Rearview Mirror Folding Motor - Driver*
M78P	Outside Rearview Mirror Folding Motor - Passenger	AXG	Outside the vehicle, at the front of the passenger door, within the A9B Outside Rearview Mirror - Passenger	—	*M78P Outside Rearview Mirror Folding Motor - Passenger*
M93	Key Capture Solenoid Actuator	-BTM	In the passenger compartment, left front, on the right side of the steering column, below the transmission shift lever	—	*M93 Key Capture Solenoid Actuator (BTM)*
M95L	Assist Step - Left	—	Under the vehicle, along the left frame rail, under the driver door	—	—
M95R	Assist Step - Right	—	Under the vehicle, along the right frame rail, under the passenger door	—	—
M96A	Active Grille Air Shutter 1 Actuator	WMI	At the front of the vehicle, center, attached to the inside of the front grille	—	*M96A Active Grille Air Shutter 1 Actuator (WMI)*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
M96B	Active Grille Air Shutter 2 Actuator	WMI	At the front of the vehicle, center, attached to the inside of the front grille	—	M96B Active Grille Air Shutter 2 Actuator (WMI)
M103	Turbocharger Vane Position Actuator	L5P	In the engine compartment, right side, mounted to turbocharger	Engine Components - Right Rear (L5P)	M103 Turbocharger Vane Position Actuator
M104L	Park Brake Actuator - Left	—	Under the vehicle, left rear, attached to the left rear brake caliper	Rear Axle Components (DZW)	M104L Park Brake Actuator - Left
M104R	Park Brake Actuator - Right	—	Under the vehicle, right rear, attached to the right rear brake caliper	Rear Axle Components (DZW)	M104R Park Brake Actuator - Right
M125	Pickup Box Endgate Power Assist Actuator	QT6	Outside of the vehicle, within the endgate, lower right corner	Endgate Components (X88)	M125 Pickup Box Endgate Power Assist Actuator (QT6)
P12	Horn	—	In the engine compartment, right front, at the bottom of the radiator core support	—	P12 Horn
P16	Instrument Cluster	—	In the passenger compartment, in the driver side of the instrument panel	Instrument Panel - Left Front Components	• P16 Instrument Cluster X1 • P16 Instrument Cluster X2
P17	Info Display Module	—	In the passenger compartment, at the center of the instrument panel	Instrument Panel - Left Front Components	• P17 Info Display Module X1 (IOR) • P17 Info Display Module X1 (IOS/IOT) • P17 Info Display Module X2 (IOR +UIJ) • P17 Info Display Module X2 (IOR +UIR)
P19AC	Speaker - Subwoofer	UQA	In the passenger compartment, under center console, under air duct to rear vents	Right Middle Passenger Compartment Components	P19AC Speaker - Subwoofer (UQA)
P19AG	Speaker - Left Front Door	—	In the passenger compartment, in the driver door	Driver Door Components	P19AG Speaker - Left Front Door
P19AH	Speaker - Right Front Door	—	In the passenger compartment, in the passenger door	Passenger Door Components	P19AH Speaker - Right Front Door
P19AL	Speaker - Left Rear Door	Crew/extended Cab	In the passenger compartment, in the left rear door	Left Rear Door Components (Crew/Extended Cab)	P19AL Speaker - Left Rear Door (UQA/UQF)
P19AM	Speaker - Right Rear Door	Crew/Extended Cab	In the passenger compartment, in the right rear door	Right Rear Door Components (Crew/Extended Cab)	P19AM Speaker - Right Rear Door (UQA/UQF)
P19J	Speaker - Left Instrument Panel	—	In the passenger compartment, in the top of the left side of the instrument panel	Instrument Panel - Left Rear Components	• P19J Speaker - Left Instrument Panel (UQA) • P19J Speaker - Left Instrument Panel (UQF/U95)
P19W	Speaker - Right Instrument Panel	—	In the passenger compartment, in the top of the right side of the instrument panel	Instrument Panel - Right Rear Components	• P19W Speaker - Right Instrument Panel (UQA) • P19W Speaker - Right Instrument Panel (UQF/U95)

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
P29	Head-Up Display	UV6	In the passenger compartment, at the left side of the instrument panel, near the windshield	*Instrument Panel - Left Rear Components*	- *P29 Head-Up Display X1 (UV6)* - *P29 Head-Up Display X2 (UV6)*
P34D	Side Object Detection Indicator - Driver	UKC	Outside of the vehicle, left side, part of E17D Outside Rearview Mirror Glass - Driver, within A9A Outside Rearview Mirror - Driver	—	—
P34P	Side Object Detection Indicator - Passenger	UKC	Outside of the vehicle, left side, part of E17P Outside Rearview Mirror Glass - Passenger, within A9B Outside Rearview Mirror - Passenger	—	—
P43	Collision Alert Indicators	-UP6	In the passenger compartment, in the top of the instrument panel, near the windshield, in front of the driver	—	*P43 Collision Alert Indicators (UEU)*
P45LR	Seat Haptic Movement Motor - Driver Left Rear	HS1	In the passenger compartment, in the left side of the driver seat cushion	—	*P45LR Seat Haptic Movement Motor - Driver Left Rear*
P45RR	Seat Haptic Movement Motor - Driver Right Rear	HS1	In the passenger compartment, in the right side of the driver seat cushion	—	*P45RR Seat Haptic Movement Motor - Driver Right Rear*
Q2	A/C Compressor Clutch	—	In the engine compartment, left front, part of G1 A/C Compressor	- *Engine Components - Left Front (L5P)* - *Engine Components - Right Front (L8T)*	*Q2 A/C Compressor Clutch*
Q5	Brake Pressure Modulator	—	In the engine compartment, left rear, part of K17 Electronic Brake Control Module	—	—
Q6	Camshaft Position Actuator Solenoid Valve	L8T	In the engine compartment, front center, mounted to timing chain cover, above crankshaft harmonic balancer	—	*Q6 Camshaft Position Actuator Solenoid Valve (L8T)*
Q8	Control Solenoid Valve Assembly	MYD	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	*Q8 Control Solenoid Valve Assembly (MYD)*
Q12	Evaporative Emission Purge Solenoid Valve	L8T	In the engine compartment, front center, mounted to intake manifold, to the left of Q38 Throttle Body	*Engine Components - Left Front (L8T)*	*Q12 Evaporative Emission Purge Solenoid Valve (L8T)*
Q13	Evaporative Emission Vent Solenoid Valve	L8T	On the underbody, at the top left side of the fuel tank	—	*Q13 Evaporative Emission Vent Solenoid Valve*
Q14	Exhaust Gas Recirculation Valve	L5P	In the engine comparment, right side, mounted above exhaust manifold	*Engine Components - Right Front (1 of 2) (L5P)*	*Q14 Exhaust Gas Recirculation Valve*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
Q17A	Fuel Injector 1	—	• (L8T) In the engine compartment, underneath intake manifold, next to cylinder 1 intake port on the cylinder head • (L5P) In the engine compartment, in the cylinder head above cylinder 1	*Engine Components - Right Front (1 of 2) (L5P)*	*Q17A Fuel Injector 1*
Q17B	Fuel Injector 2	—	• (L8T) In the engine compartment, underneath intake manifold, next to cylinder 2 intake port on the cylinder head • (L5P)In the engine compartment, in the cylinder head above cylinder 2	*Engine Components - Left Rear (L5P)*	*Q17B Fuel Injector 2*
Q17C	Fuel Injector 3	—	• (L8T) In the engine compartment, underneath intake manifold, next to cylinder 3 intake port on the cylinder head • (L5P)In the engine compartment, in the cylinder head above cylinder 3	*Engine Components - Right Rear (L5P)*	*Q17C Fuel Injector 3*
Q17D	Fuel Injector 4	—	• (L8T) In the engine compartment, underneath intake manifold, next to cylinder 4 intake port on the cylinder head • (L5P) In the engine compartment, in the cylinder head above cylinder 4	*Engine Components - Left Rear (L5P)*	*Q17D Fuel Injector 4*
Q17E	Fuel Injector 5	—	• (L8T) In the engine compartment, underneath intake manifold, next to cylinder 5 intake port on the cylinder head • (L5P) In the engine compartment, center, mounted to valve cover above cylinder 5	*Engine Components - Right Rear (L5P)*	*Q17E Fuel Injector 5*
Q17F	Fuel Injector 6	—	• (L8T) In the engine compartment, underneath intake manifold, next to cylinder 6 intake port on the cylinder head • (L5P) In the engine compartment, in the cylinder head above cylinder 6	*Engine Components - Left Rear (L5P)*	*Q17F Fuel Injector 6*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
Q17G	Fuel Injector 7	—	• (L8T)In the engine compartment, underneath intake manifold, next to cylinder 7 intake port on the cylinder head • (L5P) In the engine compartment, in the cylinder head above cylinder 7	*Engine Components - Right Rear (L5P)*	*Q17G Fuel Injector 7*
Q17H	Fuel Injector 8	—	• (L8T)In the engine compartment, underneath intake manifold, next to cylinder 8 intake port on the cylinder head • (L5P) In the engine compartment, in the cylinder head above cylinder 8	*Engine Components - Left Rear (L5P)*	*Q17H Fuel Injector 8*
Q18A	Fuel Pressure Regulator 1	L5P	In the engine compartment, in the cylinder head above cylinder 1	—	*Q18A Fuel Pressure Regulator 1 (L5P)*
Q18B	Fuel Pressure Regulator 2	L5P	In the engine compartment, left side of engine, mounted to the left rear side of the valve cover	*Engine Components - Left Rear (L5P)*	*Q18B Fuel Pressure Regulator 2*
Q20	Intake Air Flow Valve	L5P	In the engine compartment, at the front of the engine, mounted to the intake manifold inlet	*Engine Components - Right Front (1 of 2) (L5P)*	*Q20 Intake Air Flow Valve*
Q27A	Pressure Control Solenoid Valve 1	MYD	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	—
Q27B	Pressure Control Solenoid Valve 2	MYD	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	—
Q27C	Pressure Control Solenoid Valve 3	MYD	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	—
Q27D	Pressure Control Solenoid Valve 4	MYD	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	—
Q27E	Pressure Control Solenoid Valve 5	MYD	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	—
Q32A	Shift Solenoid Valve 1	MYD	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	—
Q32B	Shift Solenoid Valve 2	MYD	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	—
Q32P	Shift Solenoid Valve - Power Take-Off	—	Under the vehicle, mounted to the left side framee rail	—	*Q32P Shift Solenoid Valve - Power Take-Off*
Q38	Throttle Body	L8T	In the engine compartment, at the front of the engine, mounted to the intake manifold inlet	*Engine Components - Left Front (L8T)*	*Q38 Throttle Body (L8T)*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
Q39A	Torque Converter Clutch Pressure Control Solenoid Valve	MYD	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	—
Q44	Engine Oil Pressure Control Solenoid Valve	L8T	In the engine compartment, at the front of the engine, behind the front cover	—	Q44 Engine Oil Pressure Control Solenoid Valve (L8T)
Q46	A/C Compressor Solenoid Valve	—	In the engine compartment, left front, part of G1 A/C Compressor	• Engine Components - Left Front (L5P) • Engine Components - Right Front (L8T)	Q46 A/C Compressor Solenoid Valve
Q47	Exhaust Gas Recirculation Cooler Bypass Solenoid Valve	—	In the engine compartment, right side, mounted on top of eninge	• Engine Components - Right Rear (L5P) • Underbody Components - DEF Tank (L5P)	Q47 Exhaust Gas Recirculation Cooler Bypass Solenoid Valve (L5P)
Q61	Reductant Injector	L5P	In the engine compartment, right front, mounted to the exhaust, in front of diesel particulate filter	Underbody Components - Right Rear (Chassis Cab)	Q61 Reductant Injector (L5P)
Q67	Exhaust Aftertreatment Fuel Injector	L5P	Under the vehicle, attached to the exhaust pipe, at the middle of the diesel particulate filter	Underbody Components - Middle	Q67 Exhaust Aftertreatment Fuel Injector (L5P)
Q77A	Transmission Control Solenoid Valve 1	MGM/MGU	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	Q77A Transmission Control Solenoid Valve 1 (MGM/MGU)
Q77B	Transmission Control Solenoid Valve 2	MGM/MGU	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	Q77B Transmission Control Solenoid Valve 2 (MGM/MGU)
Q77C	Transmission Control Solenoid Valve 3	MGM/MGU	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	Q77C Transmission Control Solenoid Valve 3 (MGM/MGU)
Q77D	Transmission Control Solenoid Valve 4	MGM/MGU	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	Q77D Transmission Control Solenoid Valve 4 (MGM/MGU)
Q77E	Transmission Control Solenoid Valve 5	MGM/MGU	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	Q77E Transmission Control Solenoid Valve 5 (MGM/MGU)
Q77F	Transmission Control Solenoid Valve 6	MGM/MGU	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	Q77F Transmission Control Solenoid Valve 6 (MGM/MGU)
Q77G	Transmission Control Solenoid Valve 7	MGM/MGU	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	Q77G Transmission Control Solenoid Valve 7 (MGM/MGU)
Q77H	Transmission Control Solenoid Valve 8	MGM/MGU	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	Q77H Transmission Control Solenoid Valve 8 (MGM/MGU)
Q77J	Transmission Control Solenoid Valve 9	MGM/MGU	Under the vehicle, inside the T12 Automatic Transmission Assembly	—	Q77J Transmission Control Solenoid Valve 9 (MGM/MGU)
R6A	Terminating Resistor - High Speed Bus	—	Under the vehicle, near the left framee rail, above the spare tire, taped in the chassis harness	Underbody Components - Left Rear (Chassis Cab)	R6A Terminating Resistor - High Speed Bus

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
R6E	Terminating Resistor - High Speed Extension Bus 1	UEU	In the passenger compartment, right front, above headliner, near A9B Outside Rearview Mirror - Passenger	—	*R6E Terminating Resistor - High Speed Extension Bus 1 (UEU/UHX)*
R6F	Terminating Resistor - High Speed Extension Bus 2	—	In the passenger compartment, in the top of the right side of the instrument panel	—	*R6F Terminating Resistor - High Speed Extension Bus 2*
R12	Power Take-Off Switch Diode	—	In the passenger compartment, behind the middle of the instrument panel	—	*R12 Power Take-Off Switch Diode (PTO)*
S2	Transmission Manual Shift Switch	—	In the passenger compartment, part of the transmission shift lever	—	*S2 Transmission Manual Shift Switch*
S3	Transmission Shift Lever	—	In the passenger compartment, mounted to the steering column	*Instrument Panel - Left Front Components*	*S3 Transmission Shift Lever*
S13D	Door Lock Switch - Driver	—	In the passenger compartment, in the driver door handle trim panel	—	*S13D Door Lock Switch - Driver (AU3)*
S13P	Door Lock Switch - Passenger	—	In the passenger compartment, in the passenger door handle trim panel	—	*S13P Door Lock Switch - Passenger (AU3)*
S27	Head-Up Display Switch	UV6	In the passenger compartment, left front, left of the steering column, in the instrument panel	*Instrument Panel - Left Front Components*	*S27 Head-Up Display Switch (UV6)*
S30	Headlamp Switch	—	In the passenger compartment, left of the steering column, in the instrument panel	*Instrument Panel - Left Front Components*	*S30 Headlamp Switch*
S32R	Seat Heating Switch - Rear	KA6	In the passenger compartment, center, on the rear of the floor console	*Center Console Components (1 of 3)*	*S32R Seat Heating Switch - Rear (KA6)*
S33	Horn Switch	—	In the passenger compartment, in the center of the steering wheel, behind the driver side air bag	—	*S33 Horn Switch*
S38	Ignition Mode Switch	BTM	In the passneger compartment, right of the steering column, in the instrument panel	*Instrument Panel - Left Front Components*	*S38 Ignition Mode Switch (BTM)*
S39	Ignition Switch	-BTM	In the passenger compartment, behind the steering wheel, on the right side of the steering column	—	*S39 Ignition Switch (-BTM)*
S47D	Seat Memory Switch - Driver	A45	In the passenger compartment, on the driver door panel above the driver door switch assembly	—	*S47D Seat Memory Switch - Driver (A45)*
S51	Telematics Button Assembly	UE1	In the passenger compartment, part of the front overhead console assembly	—	—
S64D	Seat Adjuster Switch - Driver	A45	In the passenger compartment, mounted to the outboard side of the driver seat cushion	—	*S64D Seat Adjuster Switch - Driver*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
S64P	Seat Adjuster Switch - Passenger	A7K	In the passenger compartment, mounted to the outboard side of the passenger seat cushion	—	*S64P Seat Adjuster Switch - Passenger (A7K)*
S65D	Seat Lumbar Support Switch - Driver	A2X	In the passenger compartment, mounted to the outboard side of the driver seat cushion	—	*S65D Seat Lumbar Support Switch - Driver*
S65P	Seat Lumbar Support Switch - Passenger	A7K	In the passenger compartment, mounted to the outboard side of the passenger seat cushion	—	*S65P Seat Lumbar Support Switch - Passenger (A7K)*
S70E	Steering Wheel Controls Switch - Radio Presets	—	In the passenger compartment, on the left rear side of the steering wheel	—	*S70E Steering Wheel Controls Switch - Radio Presets (UK3)*
S70F	Steering Wheel Controls Switch - Radio Volume	—	In the passenger compartment, on the right rear side of the steering wheel	—	*S70F Steering Wheel Controls Switch - Radio Volume (UK3)*
S70L	Steering Wheel Controls Switch - Left	—	In the passenger compartment, on the left side of the steering wheel	—	*S70L Steering Wheel Controls Switch - Left (UK3)*
S70R	Steering Wheel Controls Switch - Right	—	In the passenger compartment, on the right side of the steering wheel	—	*S70R Steering Wheel Controls Switch - Right (UK3)*
S76	Trailer Brake Control Switch	—	In the passenger compartment, center of the instrument panel, below S48C Multifunction Switch 1 - Instrument Panel	*Instrument Panel - Left Front Components*	*S76 Trailer Brake Control Switch*
S78	Turn Signal/Multifunction Switch	—	In the passenger compartment, on the left side of the steering column	*Instrument Panel - Left Front Components*	*S78 Turn Signal/Multifunction Switch*
S79LR	Window Switch - Left Rear	—	In the passenger compartment, at the center of the left rear door, on the door trim panel	—	*S79LR Window Switch - Left Rear (AEQ)*
S79P	Window Switch - Passenger	Crew/Extended Cab	In the passenger compartment, on the passenger door trim panel, center of the door	—	• *S79P Window Switch - Passenger (A45+AEF)* • *S79P Window Switch - Passenger (AED)*
S79RR	Window Switch - Right Rear	Crew/Extended Cab	In the passenger compartment, on the right rear door trim panel, center of the door	—	*S79RR Window Switch - Right Rear (AEQ)*
S86	Vehicle Stability Control Switch	—	In the passenger compartment, front center, attached to instrument panel, between S171L Instrument Panel Center Accessory Function Switch - Left and S171R Instrument Panel Center Accessory Function Switch - Right	*Instrument Panel - Left Front Components*	*S86 Vehicle Stability Control Switch*
S91	Park Brake Control Switch	—	In the passenger compartment, at the left lower side of the instrument panel	*Instrument Panel - Left Front Components*	*S91 Park Brake Control Switch*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
S126	Drive Mode Select Switch	URC	In the passenger compartment, left front, left side of the instrument panel, above S30 Headlamp Switch	Instrument Panel - Left Front Components	S126 Drive Mode Select Switch (URC)
S146	Window/Outside Rearview Mirror Switch - Driver	—	In the passenger compartment, left front, attached to driver door trim	—	S146 Window/Outside Rearview Mirror Switch - Driver
S148L	Assist Step Kick Switch - Left	—	Rear of vehicle, under truck bed, left side	—	—
S148R	Assist Step Kick Switch - Right	—	Rear of vehicle, under truck bed, left side	—	—
S157	Pickup Box Endgate Unlatch Switch	QT5	Outside of the vehicle, at the rear of the vehicle, on the endgate	• Rear of Vehicle Components (X88) • Rear of Vehicle Components (Z88)	• S157 Pickup Box Endgate Unlatch Switch ((QK1/QK2)+QT5) • S157 Pickup Box Endgate Unlatch Switch ((QK1/QT2)+QT5)
S159E	Pickup Box Endgate Control Switch - Exterior	QT6	Outside of the vehicle, at the rear of the vehicle, on the endgate	Rear of Vehicle Components (Z88)	• S159E Pickup Box Endgate Control Switch - Exterior (QK2+QT5) • S159E Pickup Box Endgate Control Switch - Exterior (QT6)
S171L	Instrument Panel Center Accessory Function Switch - Left	—	In the passenger compartment, mounted to the instrument panel, beneath A26 HVAC Controls, left switch bank	Instrument Panel - Left Front Components	S171L Instrument Panel Center Accessory Function Switch - Left
S171R	Instrument Panel Center Accessory Function Switch - Right	—	In the passenger compartment, mounted to the instrument panel, beneath A26 HVAC Controls, right switch bank	Instrument Panel - Left Front Components	S171R Instrument Panel Center Accessory Function Switch - Right
S172	Auxiliary Multifunction Switch	9L7	In the passenger compartment, at the left lower side of the instrument panel	—	S172 Auxiliary Multifunction Switch
T1	Accessory DC/AC Power Inverter Module	KI4/KI5	In the passenger compartment, rear center, mounted ot the rear wall	Right Rear Passenger Compartment Components	• T1 Accessory DC/AC Power Inverter Module X1 (KI4/KI5) • T1 Accessory DC/AC Power Inverter Module X2 (KI4)
T2	Antenna	—	In the passenger compartment, internal to the Immobilizer Control Module	—	—
T3	Audio Amplifier	UQA	In the rear passenger compartment, mounted behind the rear seat, below the rear window	Right Rear Passenger Compartment Components	• T3 Audio Amplifier X1 (UQA) • T3 Audio Amplifier X2 (UQA) • T3 Audio Amplifier X3 (UQA) • T3 Audio Amplifier X4 (UQA)

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
T4G	Cellular Phone, Navigation, and Digital Radio Antenna	—	Outside the vehicle, at the front left of the roof	• Front of Vehicle Components (X88) • Front of Vehicle Components (Z88)	• T4G Cellular Phone, Navigation, and Digital Radio Antenna X1 (UE1) • T4G Cellular Phone, Navigation, and Digital Radio Antenna X2 (U2K)
T4M	Radio Antenna	—	Outside the vehicle, at the right rear of the hood	• Front of Vehicle Components (X88) • Front of Vehicle Components (Z88)	T4M Radio Antenna
T4P	Navigation Antenna	(IOS/IOT)-UE1	Outside of the vehicle	—	T4P Navigation Antenna (-UE1)
T4S	Wireless Communication Antenna - Bluetooth	—	Outside the vehicle, at the rear of the right front fender	—	—
T4T	Wireless Communication Antenna - WLAN	IOS/IOT	Wihtin the instrument panel, on right side	—	T4T Wireless Communication Antenna - WLAN
T8A	Ignition Coil 1	L8T	In the engine compartment, at the top of the engine, above cylinder 1	Engine Components - Left Front (L8T)	T8A Ignition Coil 1 (L8T)
T8B	Ignition Coil 2	L8T	In the engine compartment, at the top of the engine, above cylinder 2	Engine Components - Right Front (L8T)	T8B Ignition Coil 2 (L8T)
T8C	Ignition Coil 3	L8T	In the engine compartment, at the top of the engine, above cylinder 3	Engine Components - Left Front (L8T)	T8C Ignition Coil 3 (L8T)
T8D	Ignition Coil 4	L8T	In the engine compartment, at the top of the engine, above cylinder 4	Engine Components - Right Front (L8T)	T8D Ignition Coil 4 (L8T)
T8E	Ignition Coil 5	L8T	In the engine compartment, at the top of the engine, above cylinder 5	Engine Components - Left Front (L8T)	T8E Ignition Coil 5 (L8T)
T8F	Ignition Coil 6	L8T	In the engine compartment, at the top of the engine, above cylinder 6	Engine Components - Right Front (L8T)	T8F Ignition Coil 6 (L8T)
T8G	Ignition Coil 7	L8T	In the engine compartment, at the top of the engine, above cylinder 7	Engine Components - Left Front (L8T)	T8G Ignition Coil 7 (L8T)
T8H	Ignition Coil 8	L8T	In the engine compartment, at the top of the engine, above cylinder 8	Engine Components - Right Front (L8T)	T8H Ignition Coil 8 (L8T)
T10B	Keyless Entry Antenna - Instrument Panel Compartment	BTM	In the passenger compartment, front center, within instrument panel, in front of P17 Info Display Module	—	T10B Keyless Entry Antenna - Instrument Panel Compartment (BTM)
T10C	Keyless Entry Antenna - Left Front Door Handle	—	Outside of the vehicle, at the rear of the driver door, within A24D Door Handle Assembly - Driver Exterior	—	—
T10D	Keyless Entry Antenna - Right Front Door Handle	—	Outside of the vehicle, at the rear of the passenger door, within A24P Door Handle Assembly - Passenger Exterior	—	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
T10E	Keyless Entry Antenna - Rear Compartment	BTM	At the rear of the vehicle, in front of the center of the rear bumper	—	T10E Keyless Entry Antenna - Rear Compartment (BTM)
T10J	Keyless Entry Antenna - Center Console Front	BTM+D07	In the passenger compartment, front center, beneath floor console or	Center Console Components (2 of 3)	T10J Keyless Entry Antenna - Center Console Front (BTM +D07)
T10V	Keyless Entry Antenna - Front Middle Seat	BTM-D07	In the passenger compartment, front center, beneath the front middle seat	—	T10V Keyless Entry Antenna - Front Middle Seat (BTM-D07)
T12	Automatic Transmission Assembly	—	Under the vehicle, mounted to the rear of the engine	—	• T12 Automatic Transmission Assembly X1 (MGM/ MGU) • T12 Automatic Transmission Assembly X2 (MGM/ MGU) • T12 Automatic Transmission Assembly X3 (MGM/ MGU)
T22	Mobile Device Wireless Charger Module	K4C	In the passenger compartment, forward of center, in the floor console bin lid.	Center Console Components (2 of 3)	T22 Mobile Device Wireless Charger Module (K4C)
W1	Blunt Cut - Camper Trailer Provision	UY2	On the vehicle exterior, at the rear of the vehicle, left of the license plate	—	—
W8	Blunt Cut - Trailer Provision	UY3	On the vehicle exterior, at the rear of the vehicle, left of the license plate	—	—
W24	Blunt Cut - Trailer Brakes Provision	Z82-JL1	In the passenger compartment, under left side of the instrument panel	—	—
W25	Blunt Cut - Configurable Provision	9L7	In the passenger compartment, under the instrument panel, left of the brake pedal	—	—
W30	Blunt Cut - Snow Plow	VYU	In the engine compartment, right front of engine compartment	—	—
X50A	Fuse Block - Underhood	—	In the engine compartment, right front, in front of C1B Auxiliary Battery	Engine Compartment Components - Left Side	Electrical Center Identification Views on page 6-27
X50B	Fuse Block - Underhood Auxiliary	L5P	In the engine compartment, left front	—	Electrical Center Identification Views on page 6-27
X50D	Fuse Block - Battery	—	In the engine compartment, right front, on top of C1 Battery	Engine Compartment Components - Right Front	Electrical Center Identification Views on page 6-27
X50E	Fuse Block - Battery Auxiliary	—	In the engine compartment, left front, on top of C1B auxiliary battery	—	Electrical Center Identification Views on page 6-27
X51B	Fuse Block - Instrument Panel Auxiliary	9L7	In the passenger compartment, left front, under steering column, behind trim panel	—	Electrical Center Identification Views on page 6-27
X51L	Fuse Block - Instrument Panel Left	—	In the passenger compartment, left side of the instrument panel, behind side trim panel	Instrument Panel - Behind Left Side Components	Electrical Center Identification Views on page 6-27

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
X51R	Fuse Block - Instrument Panel Right	—	In the passenger compartment, right side of the instrument panel, behind side trim panel	*Instrument Panel - Right Rear Components*	*Electrical Center Identification Views on page 6-27*
X54	Fuse Block - Snow Plow	VYU	In the engine compartment, right front	*Engine Compartment Components - Left Front Snow Plow (VYU)*	*Electrical Center Identification Views on page 6-27*
X55SP	Fuse Holder - Snow Plow	VYU	In the engine compartment, right front	*Engine Compartment Components - Left Front Snow Plow (VYU)*	*Electrical Center Identification Views on page 6-27*
X80C	Accessory Power Receptacle - Cargo	KC9/KCA	Outside of the vehicle, right rear corner of the truck bed	*Left Rear of Vehicle Components*	• *X80C Accessory Power Receptacle - Cargo (KC9)* • *X80C Accessory Power Receptacle - Cargo (KC9/KCA)*
X80G	Accessory Power Receptacle - Instrument Panel	—	In the passenger compartment, front center, in the instrument panel, beneath A26 HVAC Controls	*Instrument Panel - Left Front Components*	*X80G Accessory Power Receptacle - Instrument Panel (D09)*
X80L	Accessory Power Receptacle - Center Console Rear	D07	In the passenger compartment, center, on the rear of the floor console	*Center Console Components (1 of 3)*	*X80L Accessory Power Receptacle - Center Console Rear (D07)*
X80M	Accessory Power Receptacle - Rear Seat	—	In the passenger compartment, center, on the rear of the floor console	—	*X80M Accessory Power Receptacle - Rear Seat (KPA)*
X81	Accessory Power Receptacle - 110V AC	KI4	In the passenger compartment, front center, attached to instrument panel, right of X80G Accessory Power Receptacle - Instrument Panel	*Instrument Panel - Left Front Components*	• *X81 Accessory Power Receptacle - 110V AC X1 (KI4)* • *X81 Accessory Power Receptacle - 110V AC X2 (KI4)*
X81B	Accessory Power Receptacle - 220V AC	KI5	In the passenger compartment, front center, attached to instrument panel, right of X80G Accessory Power Receptacle - Instrument Panel	—	• *X81B Accessory Power Receptacle - 220V AC X1 (KI5)* • *X81B Accessory Power Receptacle - 220V AC X2 (KI5)*
X83	Auxiliary Audio Input	—	In the passenger compartment, in the center console storage compartment	*Center Console Components (1 of 3)*	• *X83 Auxiliary Audio Input X1* • *X83 Auxiliary Audio Input X2 (D07)*
X84	Data Link Connector	—	In the passenger compartment, at the bottom of the driver side of the instrument panel	*Instrument Panel - Left Front Components*	*X84 Data Link Connector*
X85	Steering Wheel Air Bag Coil	—	In the passenger compartment, behind the steering wheel	*Steering Column Components*	• *X85 Steering Wheel Air Bag Coil X1* • *X85 Steering Wheel Air Bag Coil X2*

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
X88	Trailer Connector	—	On the vehicle exterior, at the rear of the vehicle, left of the license plate	• Rear of Vehicle Components (DZW) • Rear of Vehicle Components (X88) • Rear of Vehicle Components (Z88)	X88 Trailer Connector (U1D)
X88G	Trailer Connector - 5th Wheel	—	Rear of vehicle, mounted on left rear lower corner, of turck bed	Right Rear of Vehicle Components	X88G Trailer Connector - 5th Wheel
X92	USB Receptacle	—	In the passenger compartment, front center, in the instrument panel, beneath A26 HVAC Controls	• Center Console Components (3 of 3) • Instrument Panel - Left Front Components	• X92 USB Receptacle X1 (IOS/IOT) • X92 USB Receptacle X2 (IOR) • X92 USB Receptacle X2 (IOS/IOT) • X92 USB Receptacle X3
X92B	USB Receptacle - Rear Seat	D07/AZ3	In the passenger compartment, center, on the rear of the floor console	—	X92B USB Receptacle - Rear Seat (AZ3)
X92C	USB Receptacle - Center Console Rear	D07	In the passenger compartment, center, on the rear of the floor console	Center Console Components (1 of 3)	X92C USB Receptacle - Center Console Rear (USS)
X101	Front Fascia Harness to Body Harness	UD5	In the engine compartment, near the center of the lower radiator support	• Front Bumper Harness Routing (X88) • Front Bumper Harness Routing (Z88)	• X101 Front Object Alarm Sensor Wiring Harness to Body Wiring Harness (T3U+UD5) • X101 Front Object Alarm Sensor Wiring Harness to Body Wiring Harness (T3U-UD5) • X101 Front Object Alarm Sensor Wiring Harness to Body Wiring Harness (UD5-T3U)
X103	Chassis Harness to Chassis Harness	L8T	In the engine compartment, mounted next to the battery	Chassis Harness Routing - Left Front	X103 Chassis Wiring Harness to Chassis Wiring Harness
X104	Frontview Camera - Grille Harness to Body Harness	UVS	at the front of the vehicle, mounted behind front grille	—	X104 Frontview Camera Jumper Wiring Harness to Body Wiring Harness (UVS)
X110	Body Harness to Left Front Headlamp Harness	—	In the engine compartment, at the rear of the left headlamp assembly	—	X110 Body Wiring Harness to Front Headlamp Wiring Harness - Left Wiring Harness
X111	Engine Harness to Transfer Case Harness	NQH/NQF	Under the vehicle, near the front axle	• Engine Harness Routing - Left Rear (1 of 2) (L5P) • Engine Harness Routing - Left Rear (L8T)	X111 Engine Wiring Harness to Transfer Case Selector Shift Control Switch Wiring Harness Extension Harness (NQF/NQH)

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
X113	Left Front Auxiliary Lamp Harness to Left Front Fender Lamp Harness	Z88	In front of vehicle, left front, bottom connector of left front headlamp	—	X113 Left Front Auxiliary Lamp Wiring Harness to Left Front Fender Lamp Wiring Harness (Z88)
X115	Body Harness to Engine Harness	—	In the front of the engine compartment, near the upper left of the radiator support	• Engine Harness Routing - Left Front (L8T) • Engine Harness Routing - Left Rear (1 of 2) (L5P)	• X115 Body Wiring Harness to Engine Wiring Harness (L5P) • X115 Body Wiring Harness to Engine Wiring Harness (L8T)
X116	Engine Harness to Glow Plug Jumper Harness	L5P	In the engine compartment, on top of engine	• Engine Harness Routing - Front (L5P) • Engine Harness Routing - Left Front (L5P)	X116 Engine Wiring Harness to Engine Wiring Harness (L5P)
X118	Glow Plug Jumper Harness to Engine Jumper Harness	L5P	In the engine compartment, on top of engine	Engine Harness Routing - Front (L5P)	X118 Engine Wiring Harness to Engine Jumper Wiring Harness (L5P)
X120	Body Harness to Right Headlamp Harness	—	In the engine compartment, at the rear of the right headlamp assembly	—	X120 Body Wiring Harness to Front Headlamp Wiring Harness - Right
X123	Right Front Auxiliary Lamp Harness to Right Front Headlamp Harness	Z88	In front of vehicle, right front, bottom connector of right front headlamp	—	X123 Right Front Auxiliary Lamp Wiring Harness to Right Front Headlamp Wiring Harness (Z88)
X132	Engine Harness to Active Air Grille Shuttter Harness	WMI	At the front of the vehicle, at center, behind upper grille at hood latch	• Engine Harness Routing - Left Front (L5P) • Engine Harness Routing - Left Front (L8T)	X132 Engine Wiring Harness to Active Air Grille Shutter Jumper Wiring Harness
X133	Active Grille Air Shutter 1 Actuator Jumper Harness to Active Grille Air Shutter 2 Actuator Jumper Harness	WMI	Under the vehicle, clipped to the steering gear	—	X133 Active Grille Air Shutter 1 Actuator Jumper Wiring Harness to Active Grille Air Shutter 2 Actuator Jumper Wiring Harness (WMI)
X136	Engine Harness to Auxiliary Battery Harness	K4B	In the engine compartment, left side of engine compartmetn by battery	Engine Harness Routing - Left Front (L8T)	X136 Engine Wiring Harness to Auxiliary Battery Wiring Harness (K4B)
X138	Body Harness to Chassis Harness	—	In the rear of the engine compartment, near the rear of the under hood fuse block	Chassis Harness Routing - Left Front	X138 Body Wiring Harness to Chassis Wiring Harness
X140	Body Harness to Chassis Harness	—	In the engine compartment, left side	Chassis Harness Routing - Left Front	X140 Body Wiring Harness to Chassis Wiring Harness
X160	Engine Harness to Even Fuel Injector Harness	L8T	In the engine compartment, rear of the engine near the top center	Engine Harness Routing - Left Rear (L8T)	X160 Engine Wiring Harness to Bank1 Fuel Rail Wiring Harness (L8T)

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
X161	Engine Harness to Bank 2 Fuel Rail Harness	L8T	In the engine compartment, rear of the engine near the top right	Engine Harness Routing - Left Rear (L8T)	X161 Engine Wiring Harness to Fuel Injector Wiring Harness - Even (L8T)
X171	Chassis Harness to Engine Harness	—	in the engine compartment, on left rear of engine	• Chassis Harness Routing - Left Front • Engine Harness Routing - Left Front (L5P) • Engine Harness Routing - Left Front (L8T)	X171 Chassis Wiring Harness to Engine Wiring Harness
X172	Glow Plug Jumper Harness to Engine Jumper Harness	L5P	In the engine compartment, left front, above the G13 Generator	Engine Harness Routing - Front (L5P)	X172 Engine Wiring Harness to Engine Jumper Wiring Harness (L5P)
X176	Engine Harness to Engine Harness	PTO	Under the vehicle, mounted to left front of transmission	Engine Harness Routing - Left Rear (2 of 2) (L5P)	X176 Engine Wiring Harness to Power Take-Off Control Module Jumper Wiring Harness (PTO)
X177	Transmission Harness to Transmission Harness	(MGM/MGU)	Within transmission assembly	—	X177 Transmission Wiring Harness to Transmission Wiring Harness (MGM/MGU)
X180	Engine Harness to Engine Jumper Harness	L8T	In the engine compartment, left front of engine compartment	Engine Harness Routing - Left Front (L8T)	X180 Engine Wiring Harness to Engine Jumper Wiring Harness (L8T)
X181	Engine Harness to Engine Oil Pressure Jumper Harness	L8T	In the engine compartment, left front of engine compartment	Engine Harness Routing - Left Front (L8T)	X181 Engine Wiring Harness to Engine Oil Pressure Sensor Jumper Wiring Harness (L8T)
X183	Engine Oil Pressure Jumper Harness to Engine Oil Pressure Control Solenoid Jumper Harness	L8T	In the engine compartment left rear of engine	—	X183 Engine Oil Pressure Jumper Wiring Harness to Engine Oil Pressure Control Solenoid Jumper Wiring Harness (L8T)
X192	Snow Plow Harness to Snow Plow Harness	VYU	In front of vehicle, underhood, in front part of engine area	Engine Compartment Components - Left Front Snow Plow (VYU)	X192 Snow Plow Wiring Harness to Accessory Wiring Harness (VYU)
X205	Instrument Panel Harness to Passenger Instrument Panel Air Bag Jumper Harness	—	In the passenger compartment, behind the right side of the instrument panel near the center	Instrument Panel Harness Routing - Right Side (1 of 2)	X205 Instrument Panel Wiring Harness to Instrument Panel Air Bag Jumper Wiring Harness
X208	Body Harness to Chassis Harness	UVS/UVI	In the engine compartment, left side, in main harness bundle, abouve left front tire	Chassis Harness Routing - Left Front	X208 Body Wiring Harness to Chassis Wiring Harness (UVI/UVS)
X209	Body Harness to Instrument Panel Harness	UQA	In the passenger compartment, right front, at the bottom of the A-pillar, behind passenger kick panel	• Body Harness Routing - Right Front Passenger Compartment • Instrument Panel Harness Routing - Right Side (2 of 2)	X209 Body Wiring Harness to Instrument Panel Wiring Harness

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
X211	Instrument Panel Harness to Body Harness	—	In the passenger compartment, right front, at the bottom of the A-pillar, behind passenger kick panel	• Body Harness Routing - Right Front Passenger Compartment • Instrument Panel Harness Routing - Right Side (2 of 2)	X211 Instrument Panel Wiring Harness to Body Wiring Harness (UQA)
X225	Instrument Panel Harness to Body Harness	—	In the passenger compartment, behind the lower left side of the instrument panel	• Body Harness Routing - Left Front Passenger Compartment • Instrument Panel Harness Routing - Left Side	X225 Instrument Panel Wiring Harness to Body Wiring Harness
X228	Chassis Harness to Body Harness	UVI/UVS	In the engine compartment, left side, in main harness bundle, abouve left front tire	Chassis Harness Routing - Left Front	X228 Body Wiring Harness to Chassis Wiring Harness (UVI/UVS)
X229	Body Harness to Body Harness (UVI/UVS)	UVI/UVS	In the engine compartment, left side, in main harness bundle, abouve left front tire	Chassis Harness Routing - Left Front	X229 Body Wiring Harness to Chassis Wiring Harness (UVI/UVS)
X230	Auxiliary Heater Jumper Harness to Body Harness	C32	In the passenger compartment, right side, blow instrument panel, behind passenger kick plate	Body Harness Routing - Right Front Passenger Compartment	X230 Auxiliary Heater Jumper Wiring Harness to Body Wiring Harness (C32)
X231	Instrument Panel UPfitter Harness to Instrument Panel UPfitter Harness	9L7	In the passenger compartment, left front, under steering column, behind trim panel	—	—
X241	Body Harness to Power Inverter Module Jumper Harness (KI5)	KI5	In the passenger compartment, left side of the instrument panel	—	X241 Body Wiring Harness to Body Rear Wiring Harness Extension Harness (KI5)
X255	USB Receptacle Jumper Harness to Floor Console Harness	D07+(IOS/IOT)	In the passenger compartment, center, underneath the front of the floor console	—	X255 USB Receptacle Jumper Wiring Harness to Floor Console Wiring Harness (D07+(IOS/IOT))
X256	Headliner Harness to Instrument Panel Harness	—	In the passenger compartment, right front, at the bottom of the A-pillar, behind passenger kick panel	Instrument Panel Harness Routing - Right Side (1 of 2)	X256 Dome Lamp Wiring Harness to Instrument Panel Wiring Harness
X260	Auxiliary Instrument Panel Harness to Instrument Panel Harness	—	In the passenger compartment, left front, within instrument panel, above X84 Data Link Connector	Instrument Panel Harness Routing - Left Side	X260 Trailer Wiring Harness Extension Harness to Instrument Panel Wiring Harness (Z82)
X275	Instrument Panel Harness to Body Harness	—	In the passenger compartment, behind the lower right side of the instrument panel	• Body Harness Routing - Right Front Passenger Compartment • Instrument Panel Harness Routing - Right Side (1 of 2)	X275 Instrument Panel Wiring Harness to Body Wiring Harness
X299	Body Harness to Door Lock Reveciver Jumper Harness	MIDDLE PRDUCTION	In the passenger compartment, right rear corner, below headliner	—	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
X302	Diesel Exhaust Fluid Jumper Harness to Chassis Harness	L5P	Under vehicle, left side, mounted outside left frame rail, under passenger compartment	Chassis Harness Routing - Left Middle	X302 Diesel Exhaust Fluid Control Jumper Wiring Harness to Chassis Wiring Harness (L5P)
X308	Body Harness to Chassis Harness	UVB	In the Engine compartment underneath the brake fluid reservoir, on top of the left shock tower.	—	X308 Body COAX Wiring Harness to Chassis COAX Wiring Harness (UVB)
X309	Body Harness to Rear Cargo Camera Harness	UVN	In passenger compartment, left rear, mounted at top of c-pillar, behind trim panel	Body Harness Routing - Left Rear Passenger Compartment (2 of 2)	X309 Body Wiring Harness to Cargo Camera Jumper Wiring Harness (UVN)
X310	Driver Seat Harness to Body Harness	—	In the passenger compartment, under the passenger seat	Body Harness Routing - Left Front Passenger Compartment	X310 Driver Seat Wiring Harness to Body Wiring Harness
X320	Passenger Seat Harness to Body Harness	—	In the passenger compartment, under the passenger seat	Body Harness Routing - Right Front Passenger Compartment	X320 Passenger Seat Wiring Harness to Body Wiring Harness
X335	Exterior Roof Lamp Harness to Instrument Panel Harness	—	In the passenger compartment, left front, behind A-pillar trim	—	X335 Headliner Wiring Harness to Instrument Panel Wiring Harness (U01)
X348	Body Harness to Floor Console Harness	—	In the passenger compartment, center, underneath the rear of the floor console	• Body Harness Routing - Right Front Passenger Compartment • Center Console Harness Routing	X348 Body Wiring Harness to Front Floor Console Wiring Harness
X350	Chassis Harness to Fuel Tank Harness	L5P+N2L	Under the vehicle, near the fuel pump and level sensor assembly	—	• X350 Chassis Wiring Harness to Fuel Tank Wiring Harness (L5P +N2L) • X350 Chassis Wiring Harness to Fuel Tank Wiring Harness (L5P +N2N) • X350 Chassis Wiring Harness to Fuel Tank Wiring Harness (L8T +N2N)
X351	Chassis Harness to Fuel Tank Jumper Harness	L5P	Under the vehicle, near the fuel pump and level sensor assembly	Chassis Harness Routing - Rear (Chassis Cab)	X351 Chassis Wiring Harness to Fuel Pump Power Control Module Wiring Harness (L5P+N2N)
X370	Body Harness to Rear Seat Harness	KA6	In the passenger compartment, left rear, at the rear wall, behind the rear seat	Body Harness Routing - Left Rear Passenger Compartment (1 of 2)	X370 Body Wiring Harness to Second Row Seat Heater Control Wiring Harness (KA6)
X379	Headliner Harness to Inside Rearview Mirror Jumper Harness	IOR	In the passenger compartment, left front, under instrument panel	—	X379 Headliner COAX Wiring Harness to Inside Rearview Mirror Jumper Wiring Harness (DRZ)

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
X380	Center High Mount Stop Lamp Jumper Harness to Headliner Harness	Extended Cab/ Crew Cab	In the passenger compartment, behind the left C-pillar, near the headliner	Headliner Harness Routing (Crew/Extended Cab)	• X380 Inside Rearview Mirror Wiring Harness to Dome Lamp Wiring Harness (9L7+UVO) • X380 Inside Rearview Mirror Wiring Harness to Dome Lamp Wiring Harness (9L7-UVO)
X381	Center High Mounted Stop Lamp Jumper Harness to Inside Rearview Mirror Jumper Harness	DRZ	In the passenger compartment, at the rear of the headliner	—	X381 Center High Mounted Stop Lamp Jumper Wiring Harness to Inside Rearview Mirror Jumper Wiring Harness (DRZ)
X401	Rear Fascia Harness to Chassis Harness	—	On the vehicle underbody, behind rear bumper, near the left framee rail	• Chassis Harness Routing - Left Rear • Chassis Harness Routing - Rear (Chassis Cab) • Rear Bumper Harness Routing	X401 Rear Bumper Wiring Harness to Chassis Wiring Harness
X406	Chassis Harness to Left Rear Speed Sensor Harness	—	Rear of vehicle, undert truck bed mounted to the frame rail, left side	• Chassis Harness Routing - Rear (Chassis Cab) • Chassis Harness Routing - Right Rear	X406 Chassis Wiring Harness to Chassis Rear Wiring Harness Extension Harness
X407	Chassis Harness to Right Rear Speed Sensor Harness	—	Rear of vehicle, undert truck bed mounted to the frame rail, Reft side	• Chassis Harness Routing - Rear (Chassis Cab) • Chassis Harness Routing - Right Rear	X407 Chassis Wiring Harness to Chassis Rear Wiring Harness Extension Harness
X408	Left Side Assist Step Jumper Harness to Chassis Harness	—	Underneath the vehicle, along the outside of the left frame rail, beneath left rear door	—	X408 Running Board Jumper Wiring Harness - Left to Chassis Wiring Harness
X410	Left Tail Lamp Assembly Harness to Chassis Harness	—	At the rear of the vehicle, left corner, underneath, on left framee rail	• Chassis Harness Routing - Left Rear • Chassis Harness Routing - Rear (Chassis Cab)	X410 Tail Lamp Assembly Wiring Harness - Left to Chassis Wiring Harness
X411	Chassis Harness to Rear Fuel Tank Harness	L8T+N2N	Under the vehicle, at the top of the fuel tank, near the fuel pump and level sensor assembly	Chassis Harness Routing - Rear (Chassis Cab)	X411 Chassis Wiring Harness to Rear Fuel Tank Wiring Harness (L8T+N2N)
X412	Rear Fuel Tank Harness to Chassis Harness	—	Under the vehicle, mounted in the rear fuel tank	—	X412 Rear Fuel Tank Wiring Harness to Chassis Wiring Harness (L5P+N2N)
X414	Chassis Harness to Rear Fuel Tank Harness	L5P+N2N	Under the vehicle, at the top of the fuel tank, near the fuel pump and level sensor assembly	Chassis Harness Routing - Rear (Chassis Cab)	X414 Chassis Wiring Harness to Rear Fuel Tank Wiring Harness (L5P+N2N)

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
X417	Rear Axle Harness to Chassis Harness	—	Under Rear of vehicle, about rear axle	• Chassis Harness Routing - Rear (Chassis Cab) • Chassis Harness Routing - Right Rear	X417 Chassis Rear Wiring Harness Extension Harness to Chassis Wiring Harness
X418	Right Side Assist Step Jumper Harness to Chassis Harness	—	Underneath the vehicle, along the outside of the right frame rail, beneath right rear door	—	X418 Running Board Jumper Wiring Harness - Right to Chassis Wiring Harness
X420	Right Tail Lamp Assembly Harness to Chassis Harness	—	At the rear of the vehicle, right corner, underneath, on right framee rail	• Chassis Harness Routing - Left Rear • Chassis Harness Routing - Rear (Chassis Cab)	X420 Tail Lamp Assembly Wiring Harness - Right to Chassis Wiring Harness
X440	Rear Axle Harness to Chassis Harness	—	Under Rear of vehicle, about rear axle	• Chassis Harness Routing - Rear (Chassis Cab) • Chassis Harness Routing - Right Rear	X440 Chassis Rear Wiring Harness Extension Harness to Chassis Wiring Harness
X450	Left Tail Lamp Assembly Harness to Left Tail Lamp Assembly Jumper Harness	DZW	Underneath the rear of the vehicle, at the left rear corner	—	X450 Rear License Plate Lamp Wiring Harness Extension Harness to Tail Lamp Assembly Jumper Wiring Harness - Left
X460	Right Tail Lamp Assembly Harness to Right Tail Lamp Assembly Jumper Harness	DZW	Underneath the rear of the vehicle, at the right rear corner	—	X460 Rear License Plate Lamp Wiring Harness Extension Harness to Tail Lamp Assembly Jumper Wiring Harness - Right
X470	Power Outlet Jumper Harness to Chassis Harness	KC9/KCA	Rear of vehicle, mounted on right rear lower corner, of turck bed	—	X470 Chassis Rear Wiring Harness to Chassis Wiring Harness
X480	Trailer Harness to Trailer Harness	UY2/Z6A	At rear of vehicle, behind rear bumper	—	X480 Chassis Wiring Harness to Trailer Rear Wiring Harness (UY2/Z6A)
X481	Chassis Extension Harness to Trailer Jumper Harness	UY2/Z6A	At rear of vehicle, behind rear bumper	—	X481 Trailer Rear Wiring Harness to Trailer Rear Wiring Harness (UY2/Z6A)
X500	Driver Door Harness to Body Harness	—	In the passenger compartment, behind the left side of the instrument panel	Door Harness Routing - Driver	X500 Driver Door Wiring Harness to Body Wiring Harness
X505	Driver Door Harness to Driver Door Trim Harness	—	In the driver door, behind the driver door panel	Door Harness Routing - Driver	X505 Driver Door Wiring Harness to Driver Door Trim Wiring Harness
X510	Driver Door Harness to Outside Rearview Mirror Harness	—	In the driver door, behind the driver door panel	Door Harness Routing - Driver	X510 Driver Door Wiring Harness to Outside Rearview Mirror Wiring Harness - Driver Door

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
X511	Driver Door Harness to Outside Rearview Mirror Harness	DZC	In the driver door, behind the driver door panel	*Door Harness Routing - Driver*	*X511 Driver Door Wiring Harness to Outside Rearview Mirror Wiring Harness - Driver Door*
X600	Passenger Door Harness to Body Harness	—	In the passenger compartment, behind the right side of the instrument panel	*Door Harness Routing - Passenger*	*X600 Passenger Door Wiring Harness to Body Wiring Harness*
X605	Passenger Door Harness to Passenger Door Trim Harness	—	In the passenger door, behind the passenger door panel	*Door Harness Routing - Passenger*	*X605 Passenger Door Wiring Harness to Passenger Door Trim Wiring Harness*
X610	Passenger Door Harness to Outside Rearview Mirror Harness	—	In the passenger door, behind the passenger door panel	*Door Harness Routing - Passenger*	*X610 Passenger Door Wiring Harness to Outside Rearview Mirror - Passenger Door Wiring Harness*
X611	Passenger Door Harness to Outside Rearview Mirror Harness	DZC	In the passenger door, behind the passenger door panel	*Door Harness Routing - Passenger*	*X611 Passenger Door Wiring Harness to Outside Rearview Mirror Wiring Harness - Passenger Door Wiring Harness*
X700	Left Rear Door Harness to Body Harness	Extended Cab/ Crew Cab	In the passenger compartment, behind the left B-pillar, near the middle	*Door Harness Routing - Left Rear (Crew/ Extended Cab)*	*X700 Left Rear Door Wiring Harness to Body Wiring Harness*
X800	Right Rear Door Harness to Body Harness	Extended Cab/ Crew Cab	In the passenger compartment, behind the right B-pillar, near the middle	*Door Harness Routing - Right Rear (Crew/Extended Cab)*	*X800 Right Rear Door Wiring Harness to Body Wiring Harness*
X905	Chassis Harness to Endgate Harness	UV2/UVB/UVI	Under the vehicle, near the left lower side of the endgate	• *Chassis Harness Routing - Left Rear* • *Endgate Harness Routing (X88)* • *Endgate Harness Routing (Z88)*	*X905 Endgate Wiring Harness to Chassis Wiring Harness*
X926	Rearview Camera Harness to Chassis Harness	QK2/QT5	Under the vehicle, near the left lower side of the endgate	• *Chassis Harness Routing - Left Rear* • *Endgate Harness Routing (X88)* • *Endgate Harness Routing (Z88)*	*X926 Endgate Wiring Harness to Chassis Wiring Harness (QK2/QT5/QT6)*
X927	Rearview Camera Harness to Chassis Harness	Chassis Cab	Under the vehicle, near the left lower side of the endgate	*Chassis Harness Routing - Rear (Chassis Cab)*	*X927 Rearview Camera Wiring Harness to Chassis Wiring Harness (Chassis Cab)*
G102	Glow Plug Jumper Harness	L5P	In the engine compartment, front of engine, mounted blow belt tensioner	*G102 (L5P)*	—
G103	Battery Harness	—	In the engine compartment, mounted by auxiliary battery	—	—
G110	Body Harness	—	In the engine compartment, mounted under underhood fuse block	*G100, G110, G112 and G114*	—
G112	Body Harness	—	In the engine compartment, mounted under underhood fuse block	—	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
G114	Engine Harness	—	In the engine compartment, mounted under underhood fuse block	G100, G110, G112 and G114	—
G118	Engine Harness	K4B/KHF	In the engine compartment, mounted by auxiliary battery fuse block	—	—
G120	Body Harness	—	In the engine compartment, right side, right of C1 Battery	G120	—
G128	Body Harness	—	In the engine compartment, right rear, mounted by the battery current sensor	—	—
G129	Body Ground Strap	—	In the passenger compartment, right rear, between frame and body	G129, G131, G132, and G133	—
G130	Negative Battery Cable Harness	—	In the engine compartment, right rear corner	—	—
G131	framee Ground Strap	—	Under the vehicle, right front wheel well, behind inner fender, rearward of upper control arm	• G129, G131, G132, and G133 • G131	—
G132	Engine Ground Strap	—	Under the vehicle, right front wheel well, behind inner fender, rearward of lower control arm	G129, G131, G132, and G133	—
G133	framee Ground Strap	—	Under the vehicle, right front wheel well, behind inner fender, rearward of upper control arm	G129, G131, G132, and G133	—
G140	Engine Harness	L5P	In the engine Compartment, right side, attached to lower front engine block	G140 (L5P)	—
G141	Engine Harness	L8T	In the engine compartment, left side, mounted to the rear of the cylinder head	G141 and G142 (L8T)	—
G142	Engine Harness	L8T	In the engine compartment, right side, mounted to the rear of the cylinder head	G141 and G142 (L8T)	—
G200	Instrument Panel Harness	—	In the passenger compartment, left front, below A-pillar, behind driver side kick panel	G200	—
G215	Electrical Auxiliary Heater Jumper Harness	C32	In the passenger compartment, right front, within the instrument panel	—	—
G220	Instrument Panel Harness	—	In the passenger compartment, right front, below A-pillar, behind passenger side kick panel	G220	—
G300	Body Harness	—	In the passenger compartment, left side, at the bottom of the B-pillar	G300, G302 and G308	—
G308	Body Harness	—	In the passenger compartment, left side, beneath the driver seat	G300, G302 and G308	—
G312	Body Harness	—	In the passenger compartment, right side, beneath the passenger seat	G312, G318 and G320	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
G320	Body Harness	—	In the passenger compartment, right side, at the bottom of the B-pillar	G312, G318 and G320	—
G322	Chassis Harness	—	Under the vehicle, right side, within chassis harness, near the front hanger for the right rear leaf spring	G322	—
G340	Chassis Harness	KC9/KCA	Rear of vehicle, mounted under rear of truck beb by power outlet harness	—	—
G400	Chassis Harness	—	Under the rear of the vehicle, in front of the tow hitch, mounted to the right side of the framee	G400, G405, G415 and G416	—
G405	Chassis Harness	—	Under the rear of the vehicle, in front of the tow hitch, mounted to the center of the framee	• G400, G405, G415 and G416 • G405, G415 and G416 (Chassis Cab)	—
G415	Chassis Harness	—	Under the rear of the vehicle, in front of the tow hitch, mounted to the left side of the framee	• G400, G405, G415 and G416 • G405, G415 and G416 (Chassis Cab)	—
G416	Chassis Harness	—	Under the rear of the vehicle, in front of the tow hitch, mounted to the left side of the framee	• G400, G405, G415 and G416 • G405, G415 and G416 (Chassis Cab)	—
G420	Chassis Harness	—	At the rear of the vehicle, right side, in the rear bumper	—	—
J101	Engine Harness	UD5	In the engine compartment, left front, left side of A/C compressor	Engine Harness Routing - Left Front (L5P)	—
J102	Snow Plow Jumper Harness	VYU	In the engine compartment, in snow plow harness, after breakout to G13E	—	—
J103	Engine Harness	L8T	In the engine compartment, top rear of engine, after brakeout to cylinder 8 ignition coil	Engine Harness Routing - Left Rear (L8T)	—
J106	Engine Harness	L8T	In the engine compartment, left side of engine, after cylinder 2 injector harness branch	—	—
J107	Engine Harness	L8T	In the engine compartment, left lower side, on harness before branch to X171 chassis harness to engine harness	Engine Harness Routing - Left Front (L8T)	—
J108	Engine Harness	L8T	In the engine compartment, left side, before breakout out to X181	Engine Harness Routing - Left Rear (L8T)	—
J109	Engine Harness	L8T	In the engine compartment, left side, on engine hareness branch leading engine control module	Engine Harness Routing - Left Front (L8T)	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J110	Engine Harness	L8T	In the engine Compartment, after breakout to A/C Compressor Solenoid Valve	—	—
J112	Engine Harness	L5P	In the engine compartment, left front, after breakout to A/C conpressor	Engine Harness Routing - Left Front (L5P)	—
J114	Engine Harness	L5P	In rear of engine compartment, were engine and trasmission connect, on branch to power take off control module	Engine Harness Routing - Left Rear (2 of 2) (L5P)	—
J117	Body Harness	—	In the engine compartment, left front, before breakout to underhood fuse block	Body Harness Routing - Left Side Engine Compartment	—
J118	Body Harness	—	In the engine compartment, left front, before breakout to underhood fuse block	—	—
J120	Engine Harness	L8T	In the engine compartment, left side of engine, after cylinder 1 injector harness branch	Engine Harness Routing - Left Front (L8T)	—
J121	Engine Harness	L8T	In the engine compartment, top rear of engine, before breakout to cylinder 8 ignition coil	Engine Harness Routing - Left Rear (L8T)	—
J122	Active Grille Shutter Harness	WMI	In front of vehicle, within active grille shutter harness	—	—
J123	Active Grille Shutter Harness	WMI	In front of vehicle, within active grille shutter harness	—	—
J124	Active Grille Shutter Harness	WMI	In front of vehicle, within active grille shutter harness	—	—
J125	Active Grille Shutter Harness	WMI	In front of vehicle, within active grille shutter harness	—	—
J126	Left Headlamp Assembly Harness	—	Within left headlamp harness	—	—
J127	Right Headlamp Assembly Harenss	—	Within right headlmap harness	—	—
J128	Front Bumper Harness	T3U	In front of vehicle, behind front bumper, center of bumber harness	• Front Bumper Harness Routing (X88) • Front Bumper Harness Routing (Z88)	—
J129	Front Bumper Harness	UD5	In front of vehicle, behind front bumper, center of bumber harness	• Front Bumper Harness Routing (X88) • Front Bumper Harness Routing (Z88)	—
J130	Front Bumper Harness	UD6	In front of vehicle, behind front bumper, center of bumber harness	• Front Bumper Harness Routing (X88) • Front Bumper Harness Routing (Z88)	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J131	Engine Harness	L5P	In the engine compartment, left front, on enigne harness branch to underhood auxiliary fuse block	Engine Harness Routing - Left Rear (1 of 2) (L5P)	—
J132	Engine Harness	L5P	In the Engine Compartment, left side, before breakout to underhood fuse block	—	—
J133	Engine Harness	L5P	In the Engine Compartment, left side, before breakout to underhood fuse block	Engine Harness Routing - Left Rear (1 of 2) (L5P)	—
J136	Engine Harness	L8T	In the engine compartment, rear of engine, after breakout to G141	Engine Harness Routing - Left Rear (L8T)	—
J137	Engine Harness	L8T	In the engine compartment, rear of engine, after breakout to G141	Engine Harness Routing - Left Rear (L8T)	—
J138	Engine Harness	L8T	In the engine compartment, top rear of engine, before breakout to cylinder 8 ignition coil	Engine Harness Routing - Left Rear (L8T)	—
J139	Engine Harness	L8T	In the engine compartment, left side of engine, before breakout to ECAP purge soleniod	• Engine Harness Routing - Left Front (L8T) • Engine Harness Routing - Left Rear (L8T)	—
J140	Engine Harness	L5P	In the engine compartment, left side, on harness branch leading to underhood fuse block	• Engine Harness Routing - Left Front (L8T) • Engine Harness Routing - Left Rear (1 of 2) (L5P)	—
J142	Postive Auxiliary Battery Harness	K4B	In the engine compartmetn, right under auxiliary battery	—	—
J145	Engine Harness	MYD	Under vehicle, in harness cross over transmission, before breakout to B52F	Engine Harness Routing - Left Rear (L8T)	—
J146	Body Harness	—	In passenger compartment, in breakout to front wiper moter	—	—
J147	Engine Harness	—	• (L8T) In the engine compartment, left side, before breakout to underhood fuse block • (L5P) In the engine compartment, left side, after branch to breakout to X111	• Engine Harness Routing - Left Front (L8T) • Engine Harness Routing - Left Rear (1 of 2) (L5P)	—
J148	Body Harness	JL1	In the engine Compratment, left side, after breakout to underhood fuse block	Body Harness Routing - Left Side Engine Compartment	—
J149	Body Harness	—	In the engine Compratment, left side, after breakout to underhood fuse block	—	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J150	Chassis Harness	JL1	In the engine compartmet, left side, after breakout to X138	Chassis Harness Routing - Left Front	—
J151	Chassis Harness	—	In vehicle compartment, under instrument panel on drivers side	Chassis Harness Routing - Left Front	—
J152	Engine Harness	PTO	In rear of engine compartment, were engine and trasmission connect, on branch to power take off control module	Engine Harness Routing - Left Rear (2 of 2) (L5P)	—
J153	Engine Harness	L5P	In the engine comparment, left side, befor breakout to transmission control module	Engine Harness Routing - Left Rear (1 of 2) (L5P)	—
J154	Engine Harness	—	• (L8T) In the engine compartment, left side, on harness branch leading to underhood fuse block • (L5P) In the Engine Compartment, left side, before breakout to underhood fuse block	• Engine Harness Routing - Left Front (L8T) • Engine Harness Routing - Left Rear (1 of 2) (L5P)	—
J155	Engine Harness	—	• (L8T) In the Engine comaprtment, left side, before breakout to X181 • (L5P) In the engine compartment, before breakout to X112	Engine Harness Routing - Left Front (L5P)	—
J156	Engine Harness	L5P	In the engine compartment, before breakout to X112	—	—
J157	Engine Harness	L5P	In the engine compartment, before breakout to X112	—	—
J158	Engine Harness	—	• (L8T) In the engine compartment, left side, before breaout out to X181 • (L5P) In the engine compartment, left front, before branch to A/C pressure sensor	• Engine Harness Routing - Left Front (L5P) • Engine Harness Routing - Left Rear (L8T)	—
J159	Engine Harness	PTO	In the engine compartment, left side, before breakout to X115	Engine Harness Routing - Left Rear (1 of 2) (L5P)	—
J160	Engine Harness	PTO	In the engine compartment, before breakout to X115	Engine Harness Routing - Left Rear (2 of 2) (L5P)	—
J161	Engine Harness	PTO	In rear of engine compartment, were engine and trasmission connect, before branch to power take off control module	Engine Harness Routing - Left Rear (2 of 2) (L5P)	—
J162	Engine Harness	L8T	In rear of engine compartment, were engine and trasmission connect, after branch to power take off control module	—	—
J163	Snow Plow Jumper Harness	VYU	In the Engine Harness, on breakout to X55P snow plow fuse holder	—	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J164	Transmission Harness	MYD	In side transmission assembly	—	—
J170	Left Headlamp Assembly Harness	—	Within left headlamp harness	—	—
J171	Right Headlamp Assembly Harenss	—	Within right headlmap harness	—	—
J173	Left Headlamp Assembly Harness	—	Within left headlamp harness	—	—
J174	Right Headlamp Assembly Harenss	—	Within right headlmap harness	—	—
J175	Transmission Harness	MGM/MGU	In side transmission assembly	—	—
J176	Transmission Harness	MGM/MGU	In side transmission assembly	—	—
J177	Right Headlamp Assembly Harenss	—	Within right headlmap harness	—	—
J178	Transmission Harness	MGM/MGU	In side transmission assembly	—	—
J179	Transmission Harness	MGM/MGU	In side transmission assembly	—	—
J180	Transmission Harness	MGM/MGU	In side transmission assembly	—	—
J183	Left Headlamp Assembly Harenss	—	Within left headlamp harness	—	—
J184	Right Headlamp Assembly Harenss	—	Within right headlmap harness	—	—
J201	Instrument Panel Harness	UV6	In the passenger Compartment, within instrument panel, left side, in front of driver area, in main harness bundle	*Instrument Panel Harness Routing - Left Side*	—
J202	Instrument Panel Harness	—	In passenger compartment, winthin instrument panel, right of center of instrument panel, on main branch going to lower part of instrument panel	*Instrument Panel Harness Routing - Right Side (1 of 2)*	—
J203	Headliner Harness	—	In the passenger compartment, at base of driver side A-pillar	—	—
J204	Instrument Panel Harness	—	In the passenger compartment, within instrument Panel, left center of instrument panel harness	*Instrument Panel Harness Routing - Right Side (1 of 2)*	—
J205	Instrument Panel Harness	—	In the passenger comparemtn, within center of instrument panel, behind Radio,HVAC control panels, within main harness bundle	*Instrument Panel Harness Routing - Left Side*	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J206	Instrument Panel Harness	—	In the passenger comparemtn, within center of instrument panel, behind Radio,HVAC control panels, within main harness bundle	Instrument Panel Harness Routing - Left Side	—
J207	Instrument Panel Harness	—	In the passenger Compartment, within instrument panel, left side, in front of driver area, in main harness bundle	Instrument Panel Harness Routing - Left Side	—
J208	Instrument Panel Harness	—	In passenger compartment, within instrument panel, left side, behind left side instrument panel cover	Instrument Panel Harness Routing - Left Side	—
J209	Instrument Panel Harness	—	In the passenger compartment, within the instrument panel, within main harness bundle	Instrument Panel Harness Routing - Left Side	—
J210	Instrument Panel Harness	UE1	In the passenger compartment, within instrument panel, left side, in breakout branch to left lower side of instrument panel	Instrument Panel Harness Routing - Left Side	—
J211	HAVC Harness	—	In the passenger compartment, within the instrument panel, within HVAC Harness	—	—
J213	Instrument Panel Harness	—	In the passenger compartment, within the instrument panel, within main harness bundle	Instrument Panel Harness Routing - Left Side	—
J215	Instrument Panel Harness	—	In the passenger compartment, within instrument panel, left side, in breakout branch to left lower side of instrument panel	Instrument Panel Harness Routing - Left Side	—
J216	Instrument Panel Harness	—	In the passenger comparemtn, within center of instrument panel, behind Radio,HVAC control panels, within main harness bundle	Instrument Panel Harness Routing - Left Side	—
J217	Steering Wheel Harness	—	Within steering wheel harness	—	—
J218	Steering Wheel Harness	-BTM	Within steering wheel harness	Instrument Panel Harness Routing - Left Side	—
J219	Body Harness	—	In the passenger compartment, in body harness, after breakout to brake pedal position sensor	Body Harness Routing - Left Front Passenger Compartment	—
J220	Instrument Panel Harness	—	In the passenger compartment, within instrument Panel, left center of instrument panel harness	Instrument Panel Harness Routing - Right Side (1 of 2)	—
J223	Instrument Panel Harness	—	In passenger compartment, within instrument panel, right side of instrument panel, blow passenger air bag	Instrument Panel Harness Routing - Right Side (1 of 2)	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J224	Instrument Panel Harness	—	In the passenger comparemtn, within center of instrument panel, behind Radio,HVAC control panels, within main harness bundle	Instrument Panel Harness Routing - Left Side	—
J225	Steering Wheel Harness	—	Within steering wheel harness	—	—
J226	Body Harness	—	In the passenger compartment, under instrument panel, after breakout to accelerator pedal	Body Harness Routing - Left Front Passenger Compartment	—
J227	Body Harness	AU3	In the passenger compartment, under instrument panel, after breakout to accelerator pedal	Body Harness Routing - Left Front Passenger Compartment	—
J231	Body Harness	KI4/KI5	In the passenger compartment, right side, in crosser over between left and right body harness	Body Harness Routing - Right Front Passenger Compartment	—
J232	Body Harness	—	In the passenger compartment, right side, in crosser over between left and right body harness	Body Harness Routing - Right Front Passenger Compartment	—
J233	Body Harness	K4B	In the passenger compartment, right side, in crosser over between left and right body harness	Body Harness Routing - Right Front Passenger Compartment	—
J235	Instrument Panel Harness	—	In the passenger comparemtn, within center of instrument panel, behind Radio,HVAC control panels, within main harness bundle	Instrument Panel Harness Routing - Left Side	—
J236	Instrument Panel Harness	—	In the passenger comparemtn, within center of instrument panel, behind Radio,HVAC control panels, within main harness bundle	—	—
J282	HVAC Harness	—	In the passenger compartment, within the instrument panel, within HVAC Harness	—	—
J301	Chassis Harness	UD1/JL1	Rear of vehicle, under truck bed, left side, before breakout to auxiliary chassis control module	Chassis Harness Routing - Right Rear	—
J302	Chassis Harness	—	Rear of vehicle, under truck bed, left side, in breakout to fuel pump control module	• Chassis Harness Routing - Left Rear • Chassis Harness Routing - Rear (Chassis Cab)	—
J303	Chassis Harness	—	Rear of vehicle, under truck bed, left side, in breakout to fuel pump control module	• Chassis Harness Routing - Left Rear • Chassis Harness Routing - Rear (Chassis Cab)	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J304	Chassis Harness	—	Rear of vehicle, under truck bed, left side, after breakout to fuel pump control module	• *Chassis Harness Routing - Rear (Chassis Cab)* • *Chassis Harness Routing - Right Rear*	—
J305	Chassis Harness	—	Under vehicle, left side, mounted outside left framee rail	—	—
J306	Chassis Harness	—	Under vehicle, Right side, mounted outside right framee rail	—	—
J308	Chassis Harness	L5P	Under vehicle, left rear cab, in main harness bundle mounted to side of left frame rail	*Chassis Harness Routing - Left Middle*	—
J309	Body Harness	—	In passenger compartment, left side, before breakout to driver seat connector	*Body Harness Routing - Left Front Passenger Compartment*	—
J310	Driver Seat Harness	—	In the passenger compartment, within the driver seat harness	—	—
J311	Body Harness	—	In passenger compartment, left side, before breakout to driver seat connector	*Body Harness Routing - Left Front Passenger Compartment*	—
J312	Body Harness	—	In passenger compartment, left side, before breakout to driver seat connector	*Body Harness Routing - Left Front Passenger Compartment*	—
J313	Floor Console Harness	—	In the passenger compartment, in floor console, after breakout to X348 connector	*Center Console Harness Routing*	—
J314	Body Harness	—	In passenger compartment, right side, before breakout to G312	*Body Harness Routing - Right Front Passenger Compartment*	—
J316	Chassis Harness	—	In rear of vehicle, under truck bead, mounted to last frame cross member, before breakout to main endgate harness connector	• *Chassis Harness Routing - Left Rear* • *Chassis Harness Routing - Rear (Chassis Cab)*	—
J317	Chassis Harness	—	Rear of vehicle, under truck bed, left side, after breakout to fuel pump control module	• *Chassis Harness Routing - Rear (Chassis Cab)* • *Chassis Harness Routing - Right Rear*	—
J318	Chassis Harness	—	In rear of vehicle, under truck bead, mounted to last frame cross member, after harness breakout to G400	*Chassis Harness Routing - Left Rear*	—
J319	Headliner Harness	UEU/DD8/DRZ	In passenger compartment, in headliner, on breakout front overhead sunshade lamps	• *Headliner Harness Routing (Crew/Extended Cab)* • *Headliner Harness Routing (Regular Cab)*	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J320	Body Harness	—	In passenger compartment, right side, after breakout to right side instrument panel fuse block	*Body Harness Routing - Right Front Passenger Compartment*	—
J322	Body Harness	UVI/UVS+UQA	In passenger compartment, right side, before breakout to passenger seat connector	*Body Harness Routing - Right Front Passenger Compartment*	—
J323	Exterior Roof Lamp Harness	U01	In the passenger compartment, in headliner, in outside roof lamp harness	—	—
J324	Exterior Roof Lamp Harness	U01	In the passenger compartment, in headliner, in outside roof lamp harness	—	—
J325	Chassis Harness	UF2	In rear of vehicle, under truck bead, mounted to last frame cross member, after harness breakout to G400	*Chassis Harness Routing - Left Rear*	—
J327	Headliner Harness	DH6	In passenger compartment, in headliner, on breakout front overhead sunshade lamps	*Headliner Harness Routing (Crew/Extended Cab)*	—
J328	Headliner Harness	Crew/Extended Cab	In passenger compartment, in headliner, on breakout to second row overhead light	*Headliner Harness Routing (Crew/Extended Cab)*	—
J330	Driver Seat Harness	—	In Passenger compartment, within seat harness	—	—
J331	Passenger Seat Harness	—	In Passenger compartment, within seat harness	—	—
J332	Passenger Seat Harness	KA1	In Passenger compartment, within seat harness	—	—
J333	Driver Seat Harness	KA1	In Passenger compartment, within seat harness	—	—
J334	Passenger Seat Harness	KQV	In Passenger compartment, within seat harness	—	—
J335	Passenger Seat Harness	KQV	In Passenger compartment, within seat harness	—	—
J336	Passenger Seat Harness	KQV	In Passenger compartment, within seat harness	—	—
J337	Driver Seat Harness	KQV	In Passenger compartment, within seat harness	—	—
J338	Driver Seat Harness	KQV	In Passenger compartment, within seat harness	—	—
J339	Rear Seat Harness	KA6	In Passenger compartment, within seat harness	—	—
J340	Body Harness	A48	In passenger compartment, left side, in breakout to left instrument panel fuse block	—	—
J342	Body Harness	—	In vehicle compartment, under instrument panel on passenger side	—	—
J346	Body Harness	—	In passenger compartment, left side, after breakout to driver seat connector	*Body Harness Routing - Left Front Passenger Compartment*	—
J347	Flooe Console Harness	—	In the passenger compartment, in floor console, in breakout to auxiliary audio input	*Center Console Harness Routing*	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J349	Driver Seat Harness	—	In Passenger compartment, within seat harness	—	—
J351	Chassis Harness	—	In rear of vehicle, under truck bead, in main harness bundle, mounted to inside left frame rail, about rear axle	*Chassis Harness Routing - Right Rear*	—
J352	Chassis Harness	—	In rear of vehicle, under truck bead, in main harness bundle, mounted to inside left frame rail, about rear axle	—	—
J353	Chassis Harness	—	In rear of vehicle, under truck bead, in main harness bundle, mounted to inside left frame rail, about rear axle	*Chassis Harness Routing - Right Rear*	—
J354	Body Harness	AU3	In passenger compartment, under instrument panel, after breakout to accelator pedal sesnor	—	—
J355	Flooe Console Harness	IOS/IOT	In the passenger compartment, in floor console, after breakout to X348 connector	—	—
J356	Body Harness	AU4	In passenger compartment, under instrument panel, after breakout to accelator pedal sesnor	*Body Harness Routing - Left Front Passenger Compartment*	—
J357	Flooe Console Harness	D07	In the passenger compartment, in floor console, after breakout to X348 connector	*Center Console Harness Routing*	—
J358	Body Harness	KA6	In passenger compartment, right side, before breakout to G312	• *Body Harness Routing - Right Front Passenger Compartment* • *Center Console Harness Routing*	—
J359	Chassis Harness	L5P	Rear of vehicle, under truck bed, in main harness bundle, before breakout to fuel pressudre sensor	*Chassis Harness Routing - Left Middle*	—
J360	Chassis Harness	L5P	Rear of vehicle, under truck bed, in main harness bundle, after breakout to exhaust temperature sensor 4	*Chassis Harness Routing - Left Middle*	—
J361	Chassis Harness	L5P	Under vehicle, left rear cab, in main harness bundle mounted to side of left frame rail	*Chassis Harness Routing - Left Middle*	—
J362	Chassis Harness	L5P	Rear of vehicle, under truck bed, in main harness bundle, before breakout to fuel pressudre sensor	*Chassis Harness Routing - Left Middle*	—
J363	Chassis Harness	L5P	Rear of vehicle, under truck bed, in main harness bundle, before breakout to exhaust temperature sensor 4	• *Chassis Harness Routing - Left Middle* • *Chassis Harness Routing - Rear (Chassis Cab)*	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J364	Chassis Harness	L5P	Rear of vehicle, under truck bed, in main harness bundle, before breakout to exhaust temperature sensor 4	• Chassis Harness Routing - Left Middle • Chassis Harness Routing - Rear (Chassis Cab)	—
J401	Rear Bumper Harness	E63	Rear of vehicle, behind rear bumper, in main harnes bundle	Rear Bumper Harness Routing	—
J402	Rear Bumper Harness	E63	Rear of vehicle, behind rear bumper, in main harnes bundle	Rear Bumper Harness Routing	—
J403	Left Tail Lamp Harness	—	Within left tail assembly	—	—
J404	Right Tail Lamp Harness	—	Within right tail assembly	—	—
J405	Left Tail Lamp Jumper Harness	—	Within left tail assembly	—	—
J406	Left Tail Lamp Jumper Harness	—	Within left tail assembly	—	—
J407	Right Tail Lamp Jumper Harness	—	Within right tail assembly	—	—
J408	Right Tail Lamp Jumper Harness	—	Within right tail assembly	—	—
J409	Right Tail Lamp Jumper Harness	—	Within right tail assembly	Rear Bumper Harness Routing	—
J410	Rear Bumper Harness	UD5/UD7	Rear of vehicle, behind rear bumper, in main harnes bundle	Rear Bumper Harness Routing	—
J411	Rear Bumper Harness	UKC	Rear of vehicle, behind rear bumper, in main harnes bundle	Rear Bumper Harness Routing	—
J412	Rear Bumper Harness	UKC	Rear of vehicle, behind rear bumper, in main harnes bundle	Rear Bumper Harness Routing	—
J413	Rear Bumper Harness	UKC	Rear of vehicle, behind rear bumper, in main harnes bundle	Rear Bumper Harness Routing	—
J418	Chassis Extension Harness	UY2/Z6A	Rear of vehicle, behind rear bumper, within trailer jumper harness	—	—
J419	Chassis Extension Harness	UY2/Z6A	Rear of vehicle, behind rear bumper, within trailer jumper harness	—	—
J420	Chassis Extension Harness	UY2/Z6A	Rear of vehicle, behind rear bumper, within trailer jumper harness	—	—
J421	Chassis Extension Harness	UY2/Z6A	Rear of vehicle, behind rear bumper, within trailer jumper harness	—	—
J422	Chassis Extension Harness	UY2/Z6A	Rear of vehicle, behind rear bumper, within trailer jumper harness	—	—
J423	Chassis Extension Harness	UY2/Z6A	Rear of vehicle, behind rear bumper, within trailer jumper harness	—	—
J430	Left Tail Lamp Harness	—	Within left tail assembly	—	—

Master Electrical Component List (cont'd)

Code	Name	Option	Location	Locator View	Connector End View
J431	Left Tail Lamp Harness	—	Within left tail assembly	—	—
J432	Right Tail Lamp Harness	—	Within right tail assembly	—	—
J433	Right Tail Lamp Harness	—	Within right tail assembly	—	—
J501	Driver Door Harness	—	In the driver door, before breakout to driver door speaker	*Door Harness Routing - Driver*	—
J502	Driver Door Trim Harness	—	In the driver door, before breakout to window/mirror switch	—	—
J503	Driver Door Harness	—	In the driver door, before breakout to driver door speaker	—	—
J510	Driver Outside Rearview Mirror Harness	—	Within driver outside rearview mirror assembly	—	—
J601	Passenger Door Harness	—	In passenger door, in harness branch to door latch assembly	*Door Harness Routing - Passenger*	—
J602	Passenger Door Trim Harness	—	In passenger door, after breakout to window switch	—	—
J603	Passenger Door Harness	—	In passenger door, in harness branch to door latch assembly	*Door Harness Routing - Passenger*	—
J610	Passenger Outside Rearview Mirror Harness	—	Within passenger outside rearview mirror assembly	—	—
J701	Left Raer Door Harness	—	In left rear door, between brake outs for left rear door speaker and window motor	*Door Harness Routing - Left Rear (Crew/ Extended Cab)*	—
J801	Right Rear Door Harness	—	In the right rear door, on brach leading right rear door latch assembly	*Door Harness Routing - Right Rear (Crew/Extended Cab)*	—
J901	Endgate Harness	QK2/QT5	Within the endgate, in main bundle, after breakout for X926	*Endgate Harness Routing (Z88)*	—
J902	Endgate Harness	QK1/QK2	Within the endgate, in main bundle, after breakout for X926	*Endgate Harness Routing (Z88)*	—
J903	Endgate Harness	QK1/QK3	Within the endgate, in main bundle, after breakout for X926	*Endgate Harness Routing (Z88)*	—
J904	Endgate Harness	—	Within the endgate, in main bundle, before main harness breakouts	• *Endgate Harness Routing (X88)* • *Endgate Harness Routing (Z88)*	—
J905	Endgate Harness	QK2/QT5	Within the endgate, in main bundle, after breakout for X926	*Endgate Harness Routing (Z88)*	—

Description and Operation

Power Mode Description and Operation (Without BTM and/or ATH/ATS)

Power to many of this vehicles circuits is controlled by the module that is designated the power mode master. This vehicles power mode master is the body control module (BCM). The BCM has multiple B+ circuits that feed into it. Each of those circuits are partitioned within the controller to drive certain outputs of the vehicle’s body functions. An open or short in any one of the B+ circuits may induce multiple codes/or a section of non-functionality within the BCM with the rest of the BCM functioning normally. In this case it is useful to refer to the power distribution schematics to determine if the non-functional partition of the controller shares a common B+ circuit. The ignition switch is a low current switch with multiple discrete ignition switch signals to the power mode master for determination of the power mode that will be sent over the serial data circuits to the other modules that need this information. The power mode master will also activate relays and other direct outputs of the power mode master as needed. The power mode master determines which power mode (Off, Accessory, Run, Crank Request) is required, and reports this information to other modules via serial data. Modules which have switched voltage inputs may operate in a default mode if the power mode serial data message does not match what the individual module can see from its own connections.

The power mode master receives ignition switch signals to identify the operators desired power mode. The Power Mode Parameter tables below illustrate the correct state of these input parameters (circuits) in correspondence to the ignition switch position:

Power Mode Parameters

Ignition Switch Position	**Power Mode Transmitted**	**Ign. Off/Run/Crank (Off/Run Crank Voltage Circuit)**	**Ignition Accessory/Run (Accessory Voltage Circuit)**	**Ignition Run/Crank (Ignition 1 Voltage Circuit)**
Off Key Out	Off	Key Out / ACC	Inactive	Inactive
Off Key IN	Off	Key In / Off	Inactive	Inactive
Accessory	Accessory	Key Out / ACC	Active	Inactive
Run	Run	Run	Active	Active
Start	Crank Request	Crank	Inactive	Active

Relay Controlled Power Mode

The BCM uses the discrete ignition switch inputs Off/Run/Crank Voltage, Accessory Voltage, and Ignition 1 Voltage, to distinguish the correct power mode. The BCM, after determining the desired power mode, will activate the appropriate relays for that power mode.

The retained accessory power relay 1 and retained accessory power relay 2 remain on for a timed period after the Ignition key is removed. Refer to Retained Accessory Power Description and Operation on page 6-983 for more information on the retained accessory power function.

Transport Mode

Transport mode reduces the parasitic load of some modules during vehicle shipping and/or during vehicle storage conditions. This improves the drain time on the battery (up to 70 days without the battery going dead). When a vehicle is in transport/storage, some features may be disabled or have reduced functionality while enabled, such as keyless entry, afterblow, and content theft features.

Transport mode is initiated by turning on the hazard flashers, applying the brake pedal, and then turning and holding the ignition key to the start position with the brake pedal applied for greater than 15 s. The mode is disengaged by repeating the previous process. The driver information center (if equipped) will temporarily display Transport Mode is On when it enables and Transport Mode is OFF when it disables. For vehicles not equipped with a driver information center, the battery indicator light will constantly flash on the Instrument Cluster when enabled. This feature can be used as many times as necessary if the vehicle is to be stored for an extended period of time.

BCM Awake/Sleep States

The BCM is able to control or perform all of the BCM functions in the awake state. The BCM enters the sleep state when active control or normal monitoring of system functions has stopped and a time limit has passed. The BCM must detect certain wake-up inputs before entering the awake state. The BCM monitors for these inputs during the sleep state.

The BCM will enter the awake state if any of the following wake-up inputs are detected:

- Activity on the serial data line
- Detection of a battery reconnect
- Any door open signal
- Headlamps ON
- Key-in-ignition
- Ignition ON
- Park lamps ON
- Keyless entry or remote start message

The BCM will enter a sleep state when all of the following conditions exist:

- The ignition switch is OFF, key out.
- Ignition OFF, transmitter is out of range
- No activity exists on the serial data line.
- No outputs are commanded.
- No delay timers are actively counting.
- No wake-up inputs are present.

If all these conditions are met, the BCM will enter a low power or sleep condition.

Power Mode Description and Operation (BTM and/or ATH/ATS)

Serial Data Power Mode Master

Power to many of this vehicles circuits is controlled by the module that is designated the power mode master. This vehicles power mode master is the body control module (BCM). The BCM has multiple B+ circuits that feed into it. Each of those circuits are partitioned within the controller to drive certain outputs of the vehicle’s body functions. An open or short in any one of the B+ circuits may induce multiple codes/or a section of non-functionality within the BCM with the rest of the BCM functioning normally. In this case it is useful to refer to the power distribution schematics to determine if the non-functional partition of the controller shares a common B+ circuit. The ignition mode switch is a low current switch with a discrete ignition signal to the power mode master for determination of the power mode that will be sent over the serial data circuits to the other modules that need this information. The power mode master will also activate relays and other direct outputs of the power mode master as needed. The power mode master determines which power mode (Off, Accessory, Run/Start) is required, and reports this information to other modules via serial data. Modules which have switched voltage inputs may operate in a default mode if the power mode serial data message does not match what the individual module can see from its own connections.

The power mode master receives ignition mode switch signals to identify the operators desired power mode. The Power Mode Parameter table below illustrates the correct state of these input parameters in correspondence to the ignition mode switch with the transmitter to vehicle range:

Power Mode Parameters

Power Mode	Power Mode Transmitted	Push Button Ignition Switch (Power Button Switch Circuit Input to the BCM)	Push Button Ignition Switch Voltage Push Button Ignition Switch Voltage Input to the BCM	Key in Cylinder Switch/Key Fob in Vehicle (Transmitter in Range to the BCM Signal)
Transmitter in Range	Off	Inactive	9 V	Yes
Transmitter out of Range	Off	Inactive	9 V	No
Vehicle On Power Mode, then Press the Power Button Switch (Foot on or off the Brake Pedal) Transmitter in Vehicle	Off	Active (pushed) / Inactive (not pushed)	1.2–2.9 V (Pressed) 3.34–4.26 V (Released)	Yes
Vehicle Off Power Mode, then Press the Power Button Switch with foot off the Brake Pedal; Transmitter in Vehicle	Accessory Mode	Active (pushed) / Inactive (not pushed)	1.2–2.9 V (Pressed) 3.34–4.26 V (Released)	Yes

Power Mode Parameters (cont'd)

Power Mode	Power Mode Transmitted	Push Button Ignition Switch (Power Button Switch Circuit Input to the BCM)	Push Button Ignition Switch Voltage Push Button Ignition Switch Voltage Input to the BCM	Key in Cylinder Switch/Key Fob in Vehicle (Transmitter in Range to the BCM Signal)
Vehicle Off Power Mode, then Press the Power Button Switch with foot on the Brake Pedal; Transmitter in Vehicle	Vehicle in Run/Start Mode (Ignition ON engine running.)	Active (pushed) / Inactive (not pushed)	1.2–2.9 V (Pressed) 3.34–4.26 V (Released)	Yes
Vehicle OFF Power Mode, then Press and Hold the Power Button Switch for 5 s with foot OFF the Brake Pedal; Transmitter in Vehicle	Vehicle in Run/Start Mode (Ignition ON without the engine running)	Active (pushed) / Inactive (not pushed)	1.2–2.9 V (Pressed) 3.34–4.26 V (Released)	Yes
Vehicle OFF Power Mode, then Press and Hold the Power Button Switch for 10 s with foot OFF the Brake Pedal; Transmitter in Vehicle	Vehicle In Service Mode (Ignition ON without the engine running)	Active (pushed) / Inactive (not pushed)	1.2–2.9 V (Pressed) 3.34–4.26 V (Released)	Yes

Relay Controlled Power Mode

The BCM uses discrete push button switch inputs, transmitter in range status, current power mode state, and brake pedal position state to distinguish the correct power mode (Off, Accessory Mode, Vehicle in Run/ Start Mode). The BCM, after determining the desired power mode, will activate the appropriate relays for that power mode.

The retained accessory power relay remains on for a timed period after the Ignition key is removed. Refer to *Retained Accessory Power Description and Operation on page 6-983* for more information on the retained accessory power function.

Push Button Start

The S38 Ignition Mode Switch has two LEDs that indicate the vehicle power mode. When the vehicle is in the Off ignition mode, both LEDs will be off.

With the vehicle in the OFF ignition mode, momentarily pressing and releasing the S38 Ignition Mode Switch with the brake pedal not pressed the vehicle will enter into the Accessory ignition mode and the amber LED will illuminate. The Accessory mode has a predetermined time-out to prevent battery drain. For details, refer “Ignition Positions” in the vehicle owner manual.

With the vehicle in the OFF ignition mode, pressing and holding the S38 Ignition Mode Switch for greater than 10 s with the brake pedal not pressed the vehicle will enter into Service Mode ignition mode and the green LED will illuminate. In this mode, the vehicle will be in the Run ignition mode without the engine running. Service Mode is used for vehicle service and diagnostics that does not required the engine to be running. Service Mode will remain on until the vehicle is manually turned OFF by pressing and releasing the S38 Ignition Mode Switch. There is not battery run-down protection and leaving the vehicle in Service Mode may result is a depleted battery.

With the vehicle in the OFF ignition mode, momentarily pressing and releasing the S38 Ignition Mode Switch with the brake pedal pressed the vehicle will start and the green LED will illuminate. Upon engine starting, the vehicle will remain in the Run ignition mode. If the vehicle is left in PARK with the engine running, the vehicle will automatically turn off after a predetermined amount of time. This time will vary depending if the keyless entry transmitter was left in the vehicle. For details, refer “Extended Parking” in the vehicle owner manual.

With the vehicle in any ignition mode except Off, momentarily pressing and releasing the S38 Ignition Mode Switch the vehicle will enter the Off ignition mode.

Both LED’s have the voltage supplied from the body control module (BCM). The ignition mode switch sends the ignition mode switch status to the passive entry passive start module (PEPS) and to the BCM. The PEPS module sends a redundant signal to the BCM with the ignition mode switch status.

Transport Mode (If Equipped)

Transport mode reduces the parasitic load of some modules during vehicle shipment and/or during vehicle storage conditions. This improves the drain time on the battery (up to 70 days without the battery going dead). When a vehicle is in transport/storage, some features may be disabled or have reduced functionality while in this mode, such as disabling the Remote Function Actuator or content theft features. Transport mode is initiated by turning on the hazard flashers, applying the brake pedal, and then pushing and holding the ignition mode switch with the brake pedal pressed for greater than 15 s. The mode is disengaged by repeating the previous process. The DIC (if equipped) will momentarily display Transport Mode is On when it is enabled and Transport Mode is Off when it is disabled. For vehicles not equipped with a DIC, the battery indicator light will constantly flash on the Instrument

Cluster when Transport mode is enabled. This feature can be used as many times as necessary if the vehicle is to be stored for an extended period of time.

Transport mode utilizes a latching relay that when enabled disconnects some modules from their ignition power or memory power sources. When enabled and the vehicle is switched OFF, the BCM sends a momentary command to unlatch the relay disconnecting power up to 1 min after RAP is inactive. Every time the vehicle is switched ON the BCM will send a momentary command to latch the relay. This allows the use of all features when the ignition is ON. The BCM will send another command to unlatch the relay once the vehicle is switched OFF and RAP is inactive.

BCM Awake/Sleep States

The BCM is able to control or perform all of the BCM functions in the awake state. The BCM enters the sleep state when active control or normal monitoring of system functions has stopped and a time limit has passed. The BCM must detect certain wake-up inputs before entering the awake state. The BCM monitors for these inputs during the sleep state.

The BCM will enter the awake state if any of the following wake-up inputs are detected:

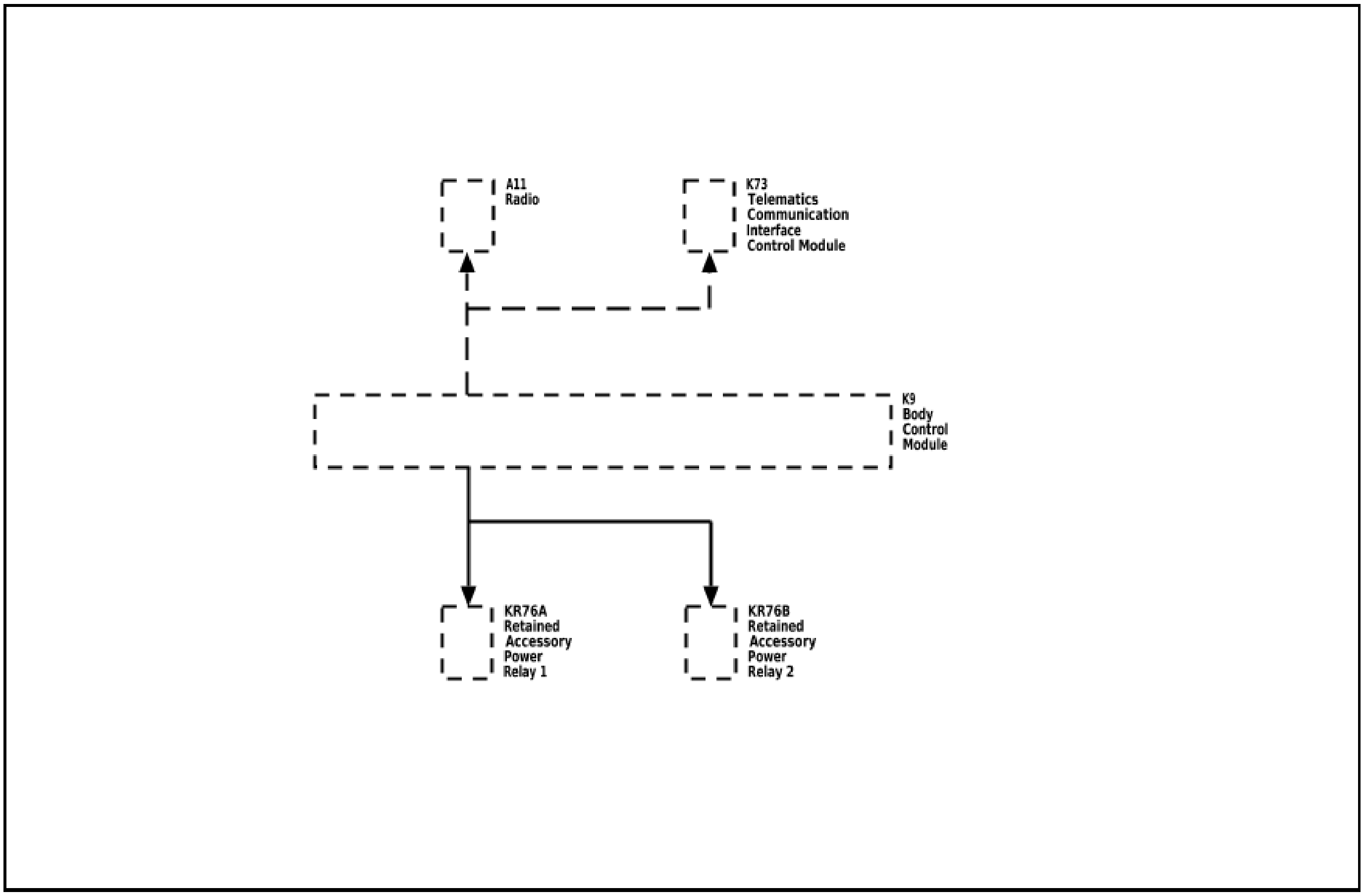
- Activity on the serial data line
- Detection of a battery reconnect
- Any door open signal
- Headlamps ON
- Key-in-ignition
- Ignition ON
- Park lamps ON
- Keyless entry or remote start message

The BCM will enter a sleep state when all of the following conditions exist:

- The ignition switch is OFF, key out.
- Ignition OFF, transmitter is out of range
- No activity exists on the serial data line.
- No outputs are commanded.
- No delay timers are actively counting.
- No wake-up inputs are present.

If all these conditions are met, the BCM will enter a low power or sleep condition.

Retained Accessory Power Description and Operation



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The body control module (BCM) monitors the ignition switch position, battery condition, and each door ajar/ open switch status to determine whether the retained accessory power should be initiated or terminated. Retained accessory power is controlled by two different methods; relay control and serial data. Some modules receive a retained accessory power message from the BCM over the serial data circuits. Serial data controlled retained accessory power is deactivated as required by their modules retained accessory power mode operation. Other subsystems are activated directly by the BCM through a relay. Components and systems that are active in retained accessory power are also activated anytime the ignition is any position other than OFF regardless of the door switch signals.

Relay Controlled Retained Accessory Power

The BCM keeps the retained accessory power relay 1 and retained accessory power relay 2 energized during all power modes, except Off-Awake and Crank. The retained accessory power relay 1 and retained accessory power relay 2 are also energized for approximately 10 minutes after shutting the ignition OFF and removing the key, providing no door is opened.

Relay controlled retained accessory power will end when one of the following conditions is met:

- The BCM receives an input from any door ajar or open switch indicating the opening of any door after the ignition key is out of the ignition.

  Note: If the BCM is receiving any door ajar or open signal from those switches when the ignition key is turned OFF, retained accessory power will not initiate.

- The BCM internal timer for the retained accessory power expires after approximately 10 minutes.
- The BCM detects a decrease in battery capacity below a prescribed limit.

Systems powered by the retained accessory power relay 1 and retained accessory power relay 2 during the retained accessory power mode are as follows:

Note: The vehicle may not be equipped with all components as listed below.

- Accessory Power Receptacle
- Cigarette Lighter Receptacle
- Sunroof Control Module
- Sunroof Switch
- Sliding Rear Window Switch
- Mobile Device Wireless Charger Module

Serial Data Controlled Retained Accessory Power

Retained accessory power systems controlled by serial data are as follows:

Radio

Radio retained accessory power activation / termination is the same as relay operation with one exception; the only door switch that will turn off the radio during retained accessory power is the driver door open switch.

Vehicle Communication Interface Module (VCIM) (Onstar®) (If Equipped)

VCIM RAP activation/termination is the same as radio operation with 1 exception; if there is an active call when the ignition key is turned off the VCIM will remain in RAP mode, and keep the radio in RAP mode until the call is terminated.

Section 7

Safety and Security

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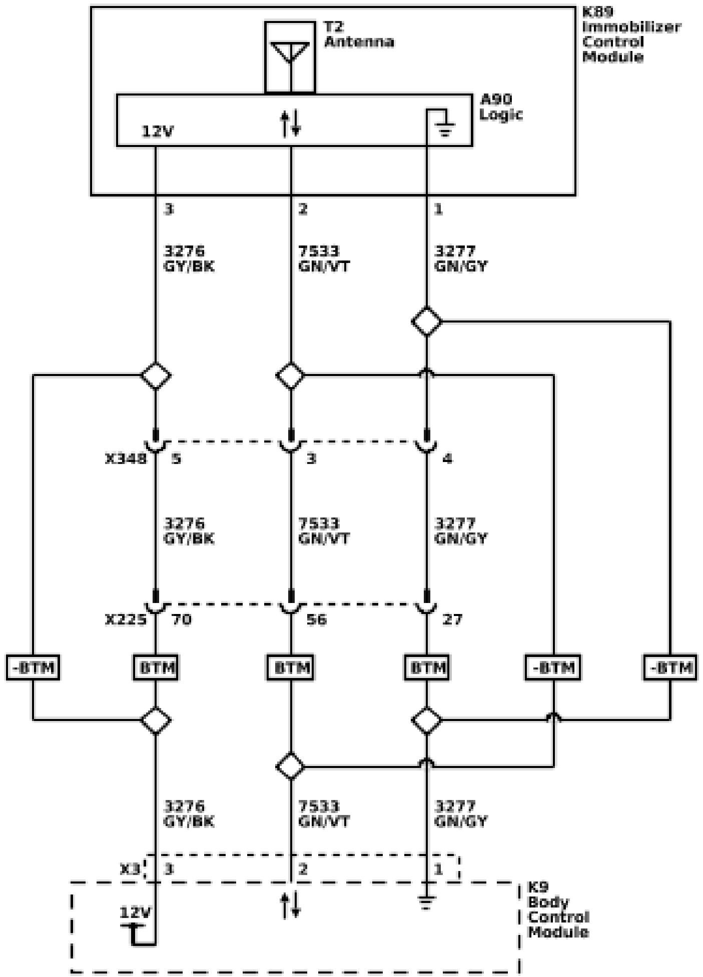
BLANK

Immobilizer

Schematic and Routing Diagrams

Immobilizer Schematics (Immobilizer)


K89
Immobilizer
Control
Module
T2
Antenna
A90
Logic
12V
3
2
1
3276
GY/BK
7533
GN/VT
3277
GN/GY
X348
5
3
4
X225
70
56
27
-BTM
BTM
K9
Body
Control
Module
X3

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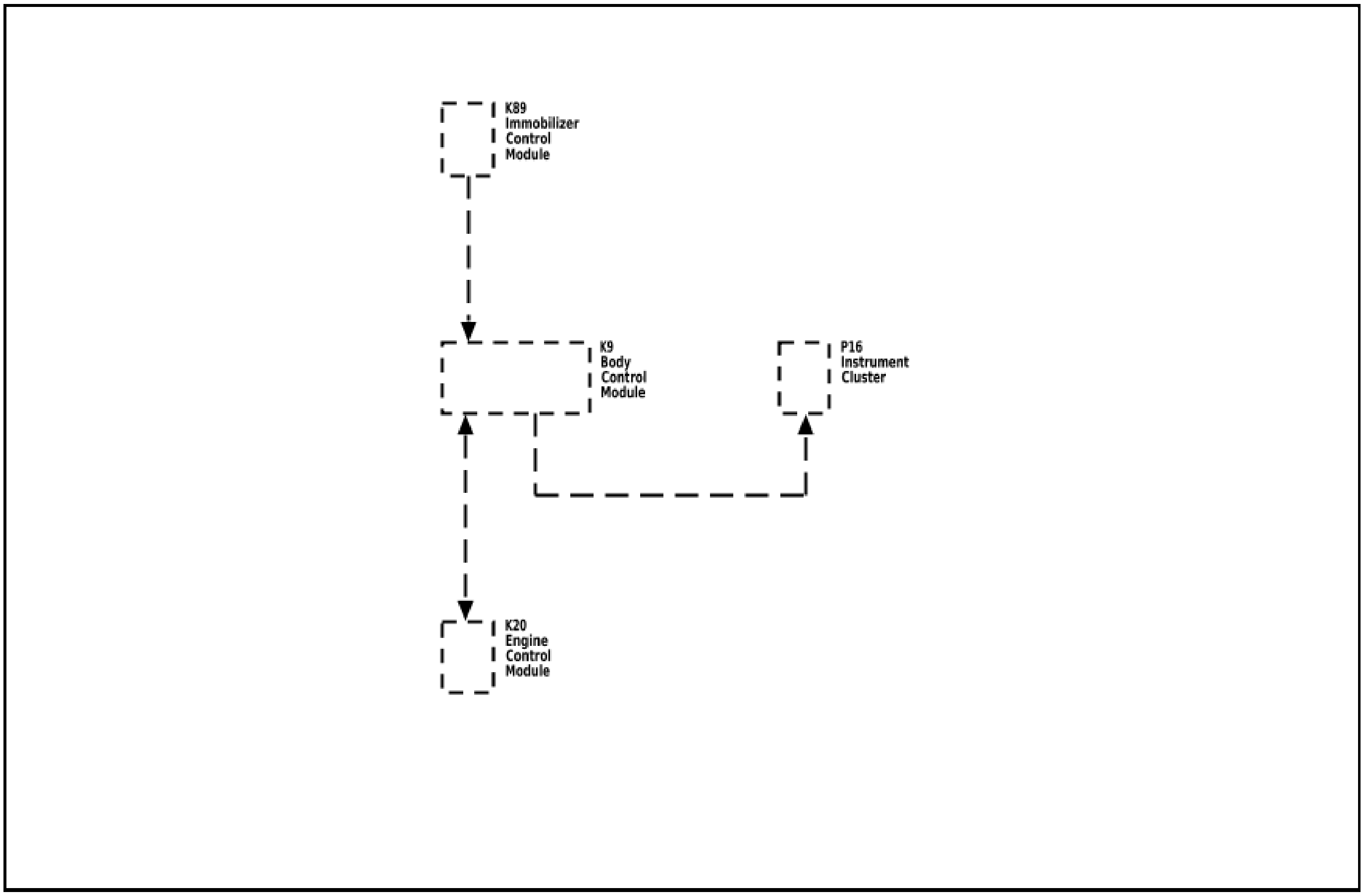
Description and Operation

Immobilizer Description and Operation



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The immobilizer system functions are provided by the body control module (BCM) and the engine control module (ECM), as well as any control modules which store and report the environment identifier.

When an ignition key is inserted into the ignition lock cylinder and the ignition is switched ON, the transponder in the key is energized by the immobilizer coil surrounding the ignition lock cylinder. This immobilizer coil is part of the immobilizer control module. The transponder transmits a signal that contains its unique value, which is received by the BCM through the immobilizer coil. The BCM then compares this value to a value stored in memory. The BCM also monitors various control modules to determine if the stored environment identifiers match.

If both the environment identifier and the value received from the transponder match, the BCM will send the prerelease password via serial data to the ECM. If the encrypted code's unique value is incorrect or the environment identifier does not match, the BCM will send the start disable message to the ECM which will prevent the vehicle starter and fuel pump from operating.

When the ECM receives the BCM prerelease password, the ECM will challenge the password. The ECM sends this challenge to the BCM via serial data. Both the ECM and BCM perform a calculation on this challenge. If the BCM calculated response to the challenge equals the calculation performed by the ECM, the ECM will allow vehicle starting.

The components of the theft system are as follows:

- BCM
- ECM
- Immobilizer control module
- Steering column lock control module, if equipped
- Ignition key
- Security indicator
- Various control modules which store and report the environment identifier

Body Control Module (BCM)

The immobilizer system is an integral part of the BCM and is controlled internally within the BCM. The BCM can learn up to 8 keys (transponder values).

The BCM uses the following inputs:

- Environment identifier exchange with various modules
- Encrypted code from the vehicle key, received by the immobilizer control module

The BCM uses the following outputs:

- Prerelease password communication with ECM
- Challenge/response with ECM

When an ignition key is inserted into the ignition lock cylinder and the ignition is switched ON, the encrypted code in the key is energized by the immobilizer control module surrounding the ignition lock cylinder. The energized transponder transmits a signal that contains its unique value, which is received by the BCM. The BCM then compares this value to the learned key code stored in memory. The BCM then performs one of the following functions:

- If the encrypted code value matches the values stored in the BCM memory, the BCM will send the prerelease password to the ECM via serial data.
- If the encrypted code unique value does not match the value stored in the BCM, the BCM will send the start disable message to the ECM via serial data.
- If the BCM is unable to measure the ignition key encrypted code value, the BCM will not send any messages to the ECM.

Engine Control Module (ECM)

When the ECM receives the BCM prerelease password, the ECM will challenge the password. The ECM sends this challenge to the BCM via the serial data circuit. Both the ECM and BCM perform a calculation on this challenge. If the calculated response from the BCM equals the calculation performed by the ECM, the ECM will allow vehicle starting.

The ECM will disable vehicle starting if any of the following immobilization conditions occur:

- The prerelease password is invalid.
- The start disable password is sent by the BCM.
- No passwords are received. There is no communication with the BCM.
- The BCM calculated response to the challenge does not equal the calculation performed by the ECM.

Immobilizer Control Module

The immobilizer control module contains an immobilizer coil which surrounds the ignition cylinder. The coil passively powers the transponder located in the ignition key when the key is in the ignition. When powered, the key transmits its unique value to the immobilizer control module, which is then relayed to the BCM via a discrete serial data circuit. The immobilizer control module also receives B+ and ground from the BCM.

The immobilizer control module is used to:

1. Learn keys
2. To start the vehicle

Steering Column Lock Control Module

On vehicles with electronic steering column lock that use a steering column lock control module the immobilizer system will prevent vehicle starting if there is a fault or no communication with the steering column lock control module.

Ignition Key

Each ignition key contains a transponder with a unique encrypted value. The transponder's encrypted value is fixed and unable to be changed. The immobilizer system uses the ignition key transponder value to determine if a valid ignition key is being used to start the vehicle.

Environment Identifier

Various modules throughout the vehicle learn a specific environment identifier during the module programming process. The environment identifier is learned by each individual module and matches the environment identifier stored in the BCM. Prior to starting after a battery disconnect, each of the modules which store a environment identifier will compare their identifier to that of the identifier stored in the BCM. If all the identifiers match, the engine starting process will continue. If the environment identifiers do not match, engine starting will be disabled.

Security Indicator

The BCM will command the instrument cluster to illuminate the security indicator when the ignition is in the ON position to indicate a fault has occurred within the immobilizer system and when the engine starting is disabled.

Remote Vehicle Speed Limiting Description and Operation

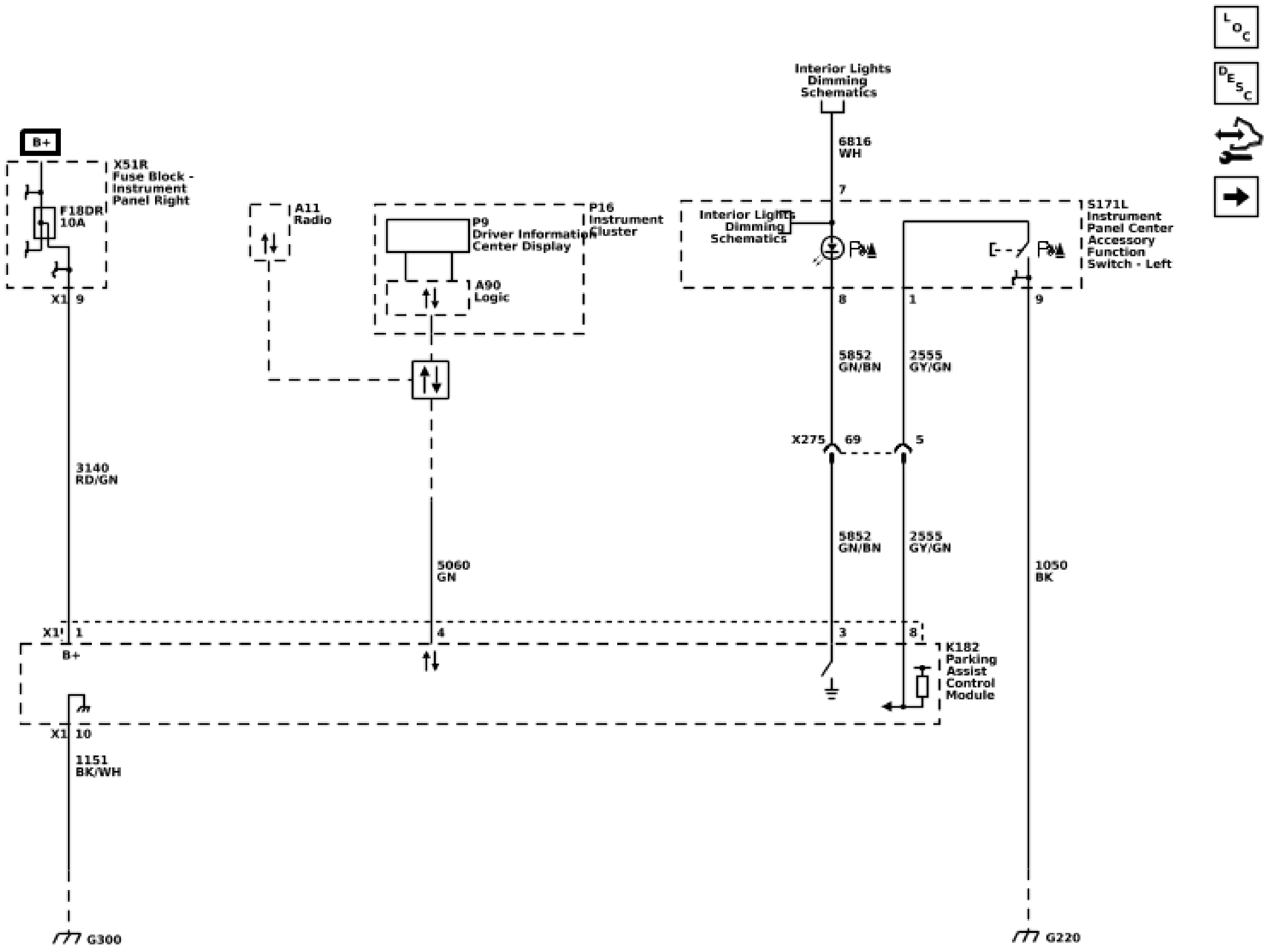
Certain vehicles equipped with OnStar® now have an additional feature that allows for remote limiting of the vehicle's speed. This OnStar® feature is called Stolen Vehicle Slow-Down and is now part of the OnStar® Stolen Vehicle Assistance service. This feature, when used in conjunction with local law enforcement and strict guidelines at the OnStar® Call Center, will slow the vehicle by interacting with the engine control system.

When the engine control system receives a valid request from the OnStar® telematics communications interface module, it will enter into a reduced engine power/vehicle speed limiting mode, which will decelerate the vehicle. Once the request is active the engine control module begins reducing engine torque to match requested vehicle speed and a REDUCED ENGINE POWER indication is displayed. No DTCs will be set during this process.

Parking Assistance Systems

Schematic and Routing Diagrams

Parking Assistance Systems Schematics (Park Assist - Power, Ground, Serial Data, and Control (UD5/UD7))


B+
X51R
Fuse Block -
Instrument
Panel Right
F18DR
10A
X1 9
3140
RD/GN
A11
Radio
P9
Driver Information
Center Display
A90
Logic
P16
Instrument
Cluster
5060
GN
Interior Lights
Dimming
Schematics
6816
WH
7
Interior Lights
Dimming
Schematics
S171L
Instrument
Panel Center
Accessory
Function
Switch - Left
8
1
9
5852
GN/BN
2555
GY/GN
X275
69
5
5852
GN/BN
2555
GY/GN
1050
BK
X1 1
B+
4
3
8
K182
Parking
Assist
Control
Module
X1 10
1151
BK/WH
G300
G220

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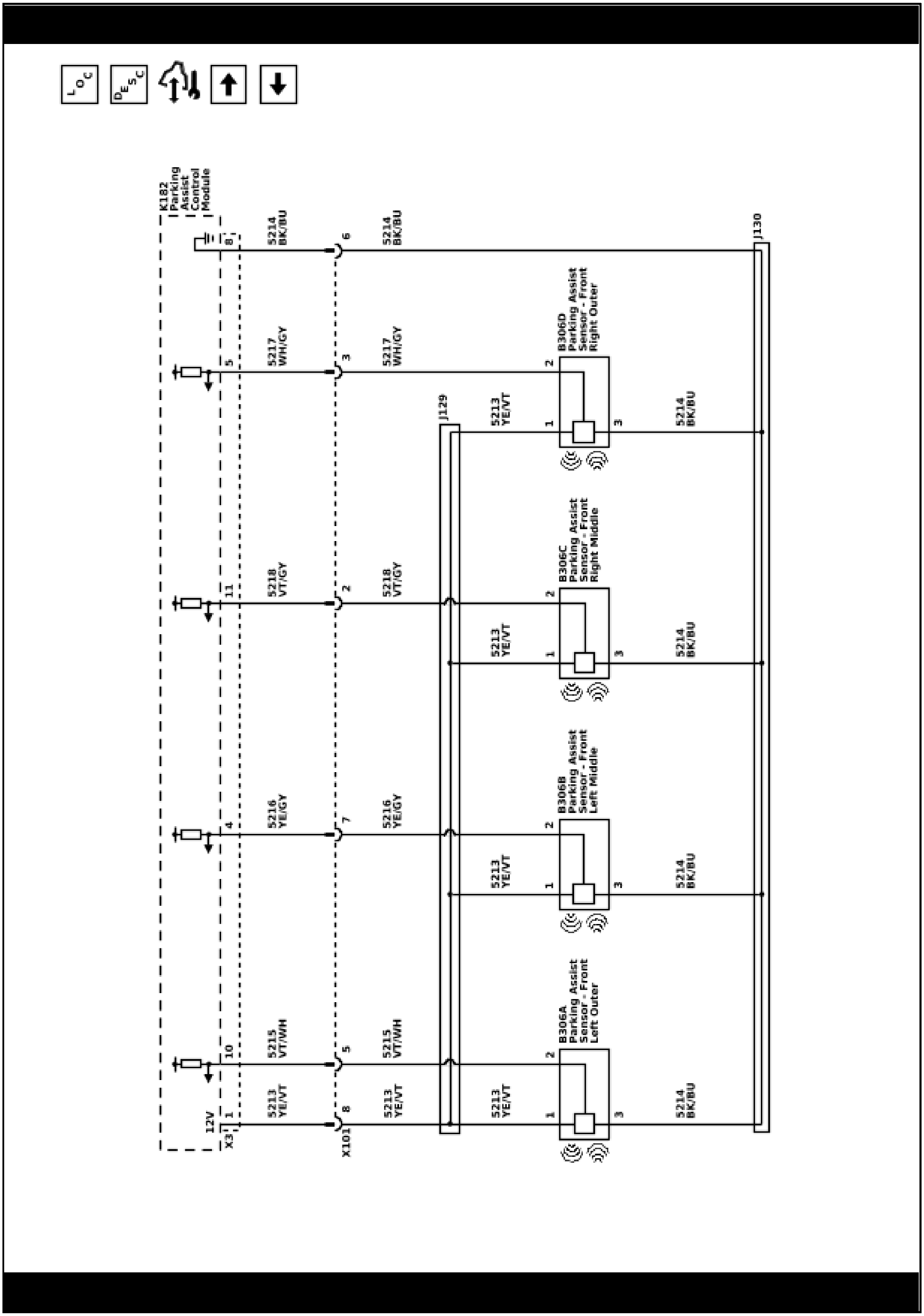
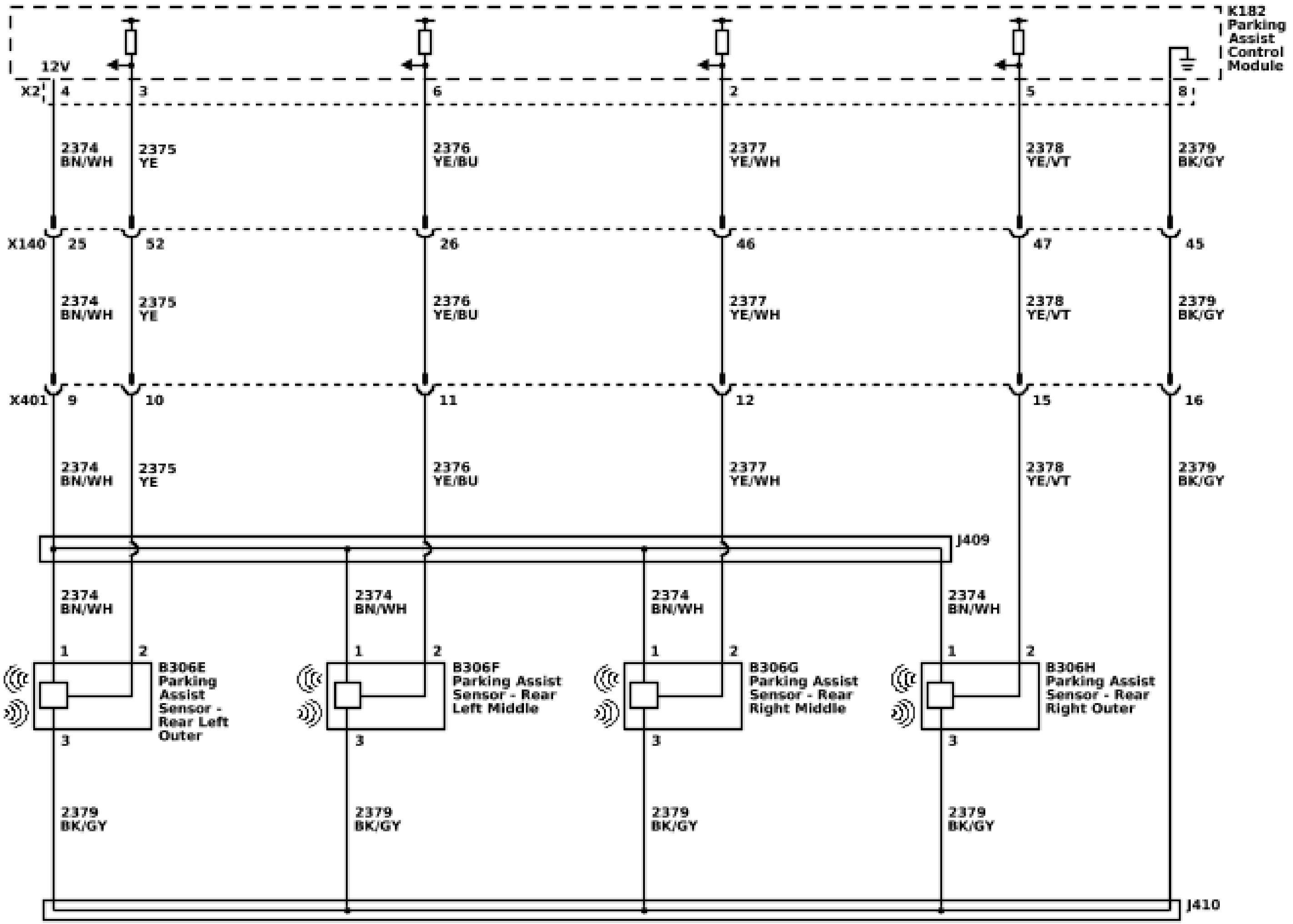
Parking Assistance Systems Schematics (Park Assist - Front Sensors (UD5))


5995593
K182 Parking Assist Control Module
X3
12V
1
10
4
11
5
8
5213 YE/VT
5215 VT/WH
5216 YE/GY
5218 VT/GY
5217 WH/GY
5214 BK/BU
X101
8
5
7
2
3
6
J129
J130
B306A Parking Assist Sensor - Front Left Outer
B306B Parking Assist Sensor - Front Left Middle
B306C Parking Assist Sensor - Front Right Middle
B306D Parking Assist Sensor - Front Right Outer
1
2
3

Parking Assistance Systems Schematics (Park Assist - Rear Sensors (UD5/UD7))


K182
Parking
Assist
Control
Module
12V
X2
4
3
6
2
5
8
2374
BN/WH
2375
YE
2376
YE/BU
2377
YE/WH
2378
YE/VT
2379
BK/GY
X140
25
52
26
46
47
45
X401
9
10
11
12
15
16
J409
J410
1
2
3
B306E
Parking
Assist
Sensor -
Rear Left
Outer
B306F
Parking Assist
Sensor - Rear
Left Middle
B306G
Parking Assist
Sensor - Rear
Right Middle
B306H
Parking Assist
Sensor - Rear
Right Outer

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Description and Operation

Parking Assist Description and Operation (UD7)

The parking assist system is designed to identify and notify the driver of an object in the vehicle path when reversing at speeds of less than 8 km/h (5 mph). The distance and location of the object is determined by four object sensors located in the rear fascia The parking assist system will notify the driver using audible beeps through the infotainment system. Some vehicles may also have a parking assist display on the infotainment screen or driver information center to graphically display the distance to an object.

The parking assist system is made up of the following components:

- K182 Parking Assist Control Module
- B306 Parking Assist Sensors
- Parking Assist Switch
- Parking Assist Switch Indicator
- Infotainment system

K182 Parking Assist Control Module

The K182 Parking Assist Control Module provides a reference voltage and a low reference to the B306 Parking Assist Sensors. The K182 Parking Assist Control Module receives individual signals from each of the four B306 Parking Assist Sensors and determines the location and distance of an object based on these inputs. When an object is detected, the K182 Parking Assist Control Module will send a serial data message to the infotainment system requesting an audible alert.

B306 Parking Assist Sensors

The B306 Parking Assist Sensors are located in the rear fascia of the vehicle. The sensors are used to determine the distance between an object and the bumper. Each sensor emits an ultrasonic frequency which is reflected off any object located behind the vehicle. These reflections are received by the sensors. The time difference between the emission of the frequency and when the reflection is received is known as sensor echo time; it is used to determine the distance to the object. The sensors report this information to the K182 Parking Assist Control Module.

Parking Assist Switch

The parking assist system can be activated and deactivated by pressing the parking assist switch. The K182 Parking Assist Control Module applies voltage and monitors the parking assist switch signal circuit. The parking assist switch is a normally open switch. With the switch open, voltage seen at the K182 Parking Assist Control Module is high. When the parking assist switch is pressed, the switch is closed and the signal circuit is pulled to ground. With the switch closed, voltage seen at the K182 Parking Assist Control Module is low. The K182 Parking Assist Control Module will respond to this by activating or deactivating the parking assist function.

Parking Assist Switch Indicator

When the parking assist system is enabled, the K182 Parking Assist Control Module will illuminate the indicator on the switch. The indicator receives voltage through a high control circuit from the K9 Body Control Module and is controlled through a low control circuit by the K182 Parking Assist Control Module.

Infotainment System

The infotainment system controls the audible alert for the parking assist system. If the an object is detected the infotainment system will command beeps as an audible alert to the driver.

Parking Assist Operation

When an object is within the measuring range of the B306 Parking Assist Sensors, the ultrasonic pulse is reflected and is received by the sending or a neighboring sensor. The sensor converts this signal into a voltage signal and sends this signal to the K182 Parking Assist Control Module. The K182 Parking Assist Control Module evaluates the received sensor signals. As soon as an object is within the measuring range, the K182 Parking Assist Control Module sends a message via serial data to the infotainment system to provide an audible alert signal.

The parking assist system can detect objects greater than 7.6 cm (3 in) wide and 25.4 cm (10 in) tall. The system cannot detect objects below the bumper or underneath the vehicle.

When the transmission is in R, parking assist is automatically activated, unless disable through vehicle personalization.

The K182 Parking Assist Control Module carries out a self test and monitors the sensors for electrical and mechanical faults. Monitored is the power supply of each sensor and the sensor signals. Mud, ice and snow may cause obstruction of the function of the sensors. The K182 Parking Assist Control Module also determines if the correct type of sensor is installed. If any of these tests fails, a DTC with corresponding symptom is set and the parking assist system is deactivated.

Parking Assist System Messages

SERVICE PARK ASSIST

The driver information center displays SERVICE PARK ASSIST when the K182 Parking Assist Control Module detects a malfunction in the parking assist system and the system is disabled. The driver information center also displays SERVICE PARK ASSIST when a loss of communication occurs with the K182 Parking Assist Control Module.

PARK ASSIST OFF

The PARK ASSIST OFF message is displayed in the driver information center when the parking assist system is disabled due to conditions that disable or inhibit the system. The K182 Parking Assist Control Module requests the driver information center display PARK ASSIST OFF when it detects that one of the following conditions:

- The parking assist system is manually disabled.
- An object is attached to the rear of the vehicle, such as a trailer, bicycle rack, trailer hitch receiver, or tow bar. Also, an object extending beyond a lowered tailgate will disable the system.

- The parking assist sensors are covered by snow, mud, dirt, slush, or ice.
- The vehicle rear fascia is damaged.
- Excessive paint thickness on a replacement B306 Parking Assist Sensor.
- The B306 Parking Assist Sensors are disrupted by vibrations, like those caused by a large nearby vehicle or from heavy equipment such as a jackhammer.

Parking Assist Description and Operation (UD5)

The parking assist system can help drivers avoid certain objects in their path during low-speed parking. The distance and location of the object is determined by 4 object sensors located in the rear fascia and 4 object sensors located in the front fascia. The parking assist system may not detect all children, pedestrians, bicyclists, animals or objects below the bumper. Drivers should remember to always check the area around the vehicle before moving forward or backing up. The parking assist system will not stop or slow down a vehicle. It does not engage a vehicle’s throttle or braking. No safety system can take the place of an alert and engaged driver.

The parking assist system is made up of the following components:

- K182 Parking Assist Control Module
- B306 Parking Assist Sensors
- Parking Assist Switch
- Parking Assist Switch Indicator
- Safety Alert Seat (HS1)
- Infotainment system

K182 Parking Assist Control Module

The K182 Parking Assist Control Module provides a reference voltage and a low reference to the B306 Parking Assist Sensors. The K182 Parking Assist Control Module receives individual signals from each of the four B306 Parking Assist Sensors and determines the location and distance of an object based on these inputs. When an object is detected, the K182 Parking Assist Control Module will send a serial data message to the infotainment system requesting an audible alert.

B306 Parking Assist Sensors

The B306 Parking Assist Sensors are located in the front and rear fascia of the vehicle. The sensors are used to determine the distance between an object and the bumper. Each sensor emits an ultrasonic frequency which is reflected off any object located behind the vehicle. These reflections are received by the sensors. The time difference between the emission of the frequency and when the reflection is received is known as sensor echo time; it is used to determine the distance to the object. The sensors report this information to the K182 Parking Assist Control Module.

Parking Assist Switch

The parking assist system can be activated and deactivated by pressing the parking assist switch. The K182 Parking Assist Control Module applies voltage and monitors the parking assist switch signal circuit. The parking assist switch is a normally open switch. With the switch open, voltage seen at the K182 Parking Assist Control Module is high. When the parking assist switch is pressed, the switch is closed and the signal circuit is pulled to ground. With the switch closed, voltage seen at the K182 Parking Assist Control Module is low. The K182 Parking Assist Control Module will respond to this by activating or deactivating the parking assist function.

Parking Assist Switch Indicator

When the parking assist system is enabled, the K182 Parking Assist Control Module will illuminate the indicator on the switch. The indicator receives voltage through a high control circuit from the K9 Body Control Module and is controlled through a low control circuit by the K182 Parking Assist Control Module.

Safety Alert Seat (HS1)

The K40 Seat Memory Control Module controls the P45 Seat Haptic Movement Motors. The P45 Seat Haptic Movement Motors provide haptic alert to the driver. If an object is detected, the K40 Seat Memory Control Module will command pulses to the P45 Seat Haptic Movement Motors as an alert to the driver.

Infotainment System

The infotainment system controls the audible alert for the parking assist system. If the an object is detected the infotainment system will command beeps as an audible alert to the driver.

Front and Rear Parking Assist Operation

The rear parking assist system uses 4 B306 Parking Assist Sensors located on the rear fascia and functions when the transmission is in REVERSE. When a driver is backing up at a low speed, below 8 km/h (5 mph), the B306 Parking Assist Sensors may detect objects up to 8 feet (2.4 m) behind the vehicle. When an object is within the measuring range of the B306 Parking Assist Sensors, the ultrasonic pulse is reflected and is received by the sending or a neighboring sensor. The sensor converts this signal into a voltage signal and sends this signal to the K182 Parking Assist Control Module. The K182 Parking Assist Control Module evaluates the received sensor signals.

When an object is first detected while backing up, the parking assist system emits low-pitched beeps from the rear speakers, or, if the vehicle is equipped with the Safety Alert Seat (HS1), the seat pulses 2 times on both sides of the seat. On some vehicles, the time between beeps may get shorter as the vehicle approaches the detected object . When an object is within 0.6 m (2 ft) of the bumper, 5 repeating low-pitched beeps are played from the rear speakers, or, if the vehicle is equipped with the Safety Alert Seat (HS1), it pulses 5 times on both sides. When an object is within 0.3 m (1 ft) of the bumper, repeating low-pitched beeps or a continuous low-pitched tone is played from the rear speakers, or, if the vehicle is equipped with the Safety Alert Seat (HS1), the seat pulses 5 times on both sides

The front parking assist system uses 4 B306 Parking Assist Sensors located on the front fascia and functions when the vehicle is moving forward at low speeds. When a driver is driving forward at a low speed, below

8 km/h (5 mph), the B306 Parking Assist Sensors may detect objects up to 8 feet (2.4 m) in front og the vehicle. When an object is within the measuring range of the B306 Parking Assist Sensors, the ultrasonic pulse is reflected and is received by the sending or a neighboring sensor. The sensor converts this signal into a voltage signal and sends this signal to the K182 Parking Assist Control Module. The K182 Parking Assist Control Module evaluates the received sensor signals.

The front parking assist system uses a parking assist display with bars that show "distance to object," driving direction, and object location information for the parking assist system. As the vehicle gets closer to the detected object, distance-to-object information and caution triangles may be displayed that changes from yellow to amber to red.

When an object is within 0.3 m (1 ft) of the bumper, repeating low-pitched beeps or a continuous low-pitched tone is played from the rear speakers, or, if the vehicle is equipped with the Safety Alert Seat (HS1), the seat pulses 5 times on both sides

The parking assist system can be turned ON and OFF using the parking assist switch control or through driver information center.

The K182 Parking Assist Control Module carries out a self test and monitors the sensors for electrical and mechanical faults. Monitored is the power supply of each sensor and the sensor signals. Mud, ice and snow may cause obstruction of the function of the sensors. The K182 Parking Assist Control Module also determines if the correct type of sensor is installed. If any of these tests fails, a DTC with corresponding symptom is set and the parking assist system is deactivated.

Parking Assist System Messages

SERVICE PARK ASSIST

The driver information center displays SERVICE PARK ASSIST when the K182 Parking Assist Control Module detects a malfunction in the parking assist system and the system is disabled. The driver information center also displays SERVICE PARK ASSIST when a loss of communication occurs with the K182 Parking Assist Control Module.

PARK ASSIST OFF

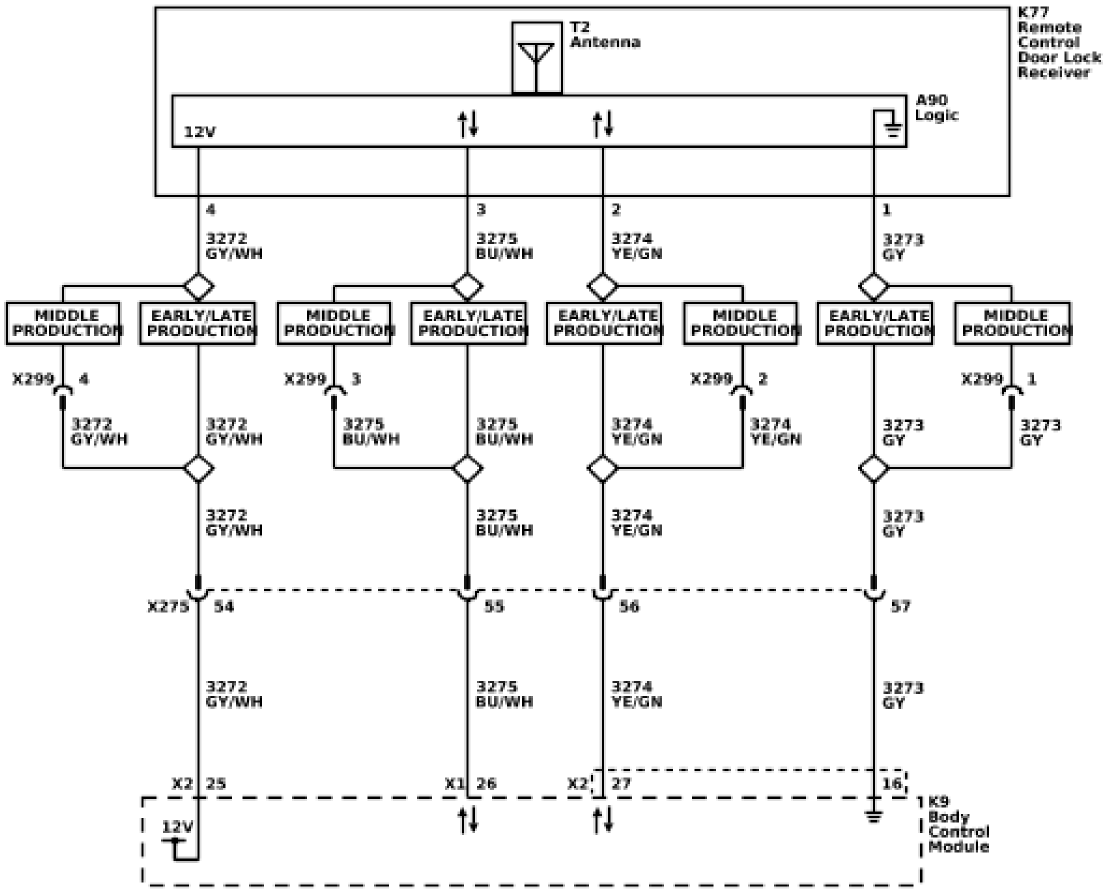
The PARK ASSIST OFF message is displayed in the driver information center when the parking assist system is disabled due to conditions that disable or inhibit the system. The K182 Parking Assist Control Module requests the driver information center display PARK ASSIST OFF when it detects that one of the following conditions:

- The parking assist system is manually disabled.
- An object is attached to the rear of the vehicle, such as a trailer, bicycle rack, trailer hitch receiver, or tow bar. Also, an object extending beyond a lowered tailgate will disable the system.
- The B306 Parking Assist Sensors are covered by snow, mud, dirt, slush, or ice.
- The vehicle front or rear fascia is damaged.
- Excessive paint thickness on a replacement B306 Parking Assist Sensor.
- The B306 Parking Assist Sensors are disrupted by vibrations, like those caused by a large nearby vehicle or from heavy equipment such as a jackhammer.

Remote Functions

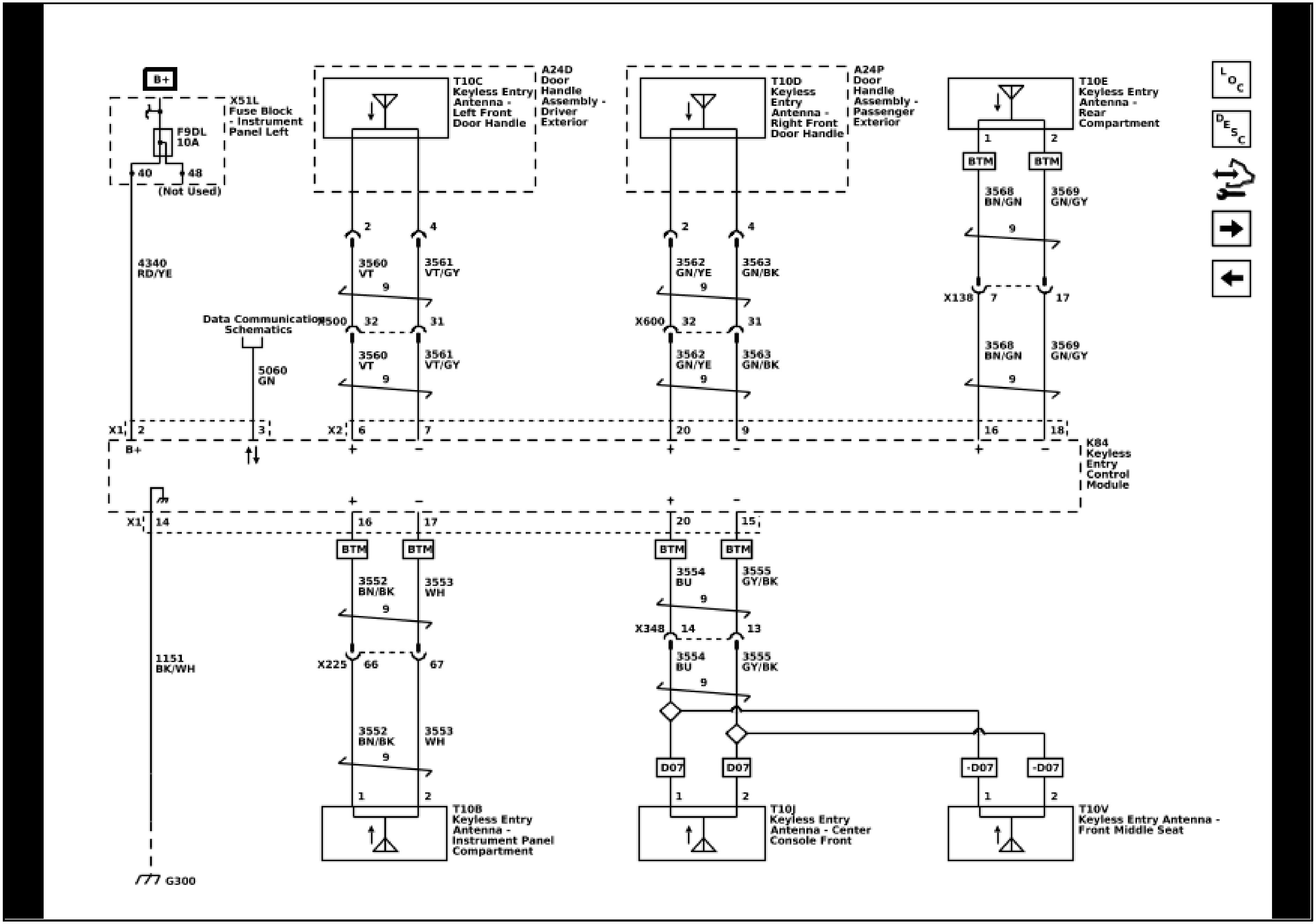
Schematic and Routing Diagrams

Remote Function Schematics (Keyless Entry (AQQ))

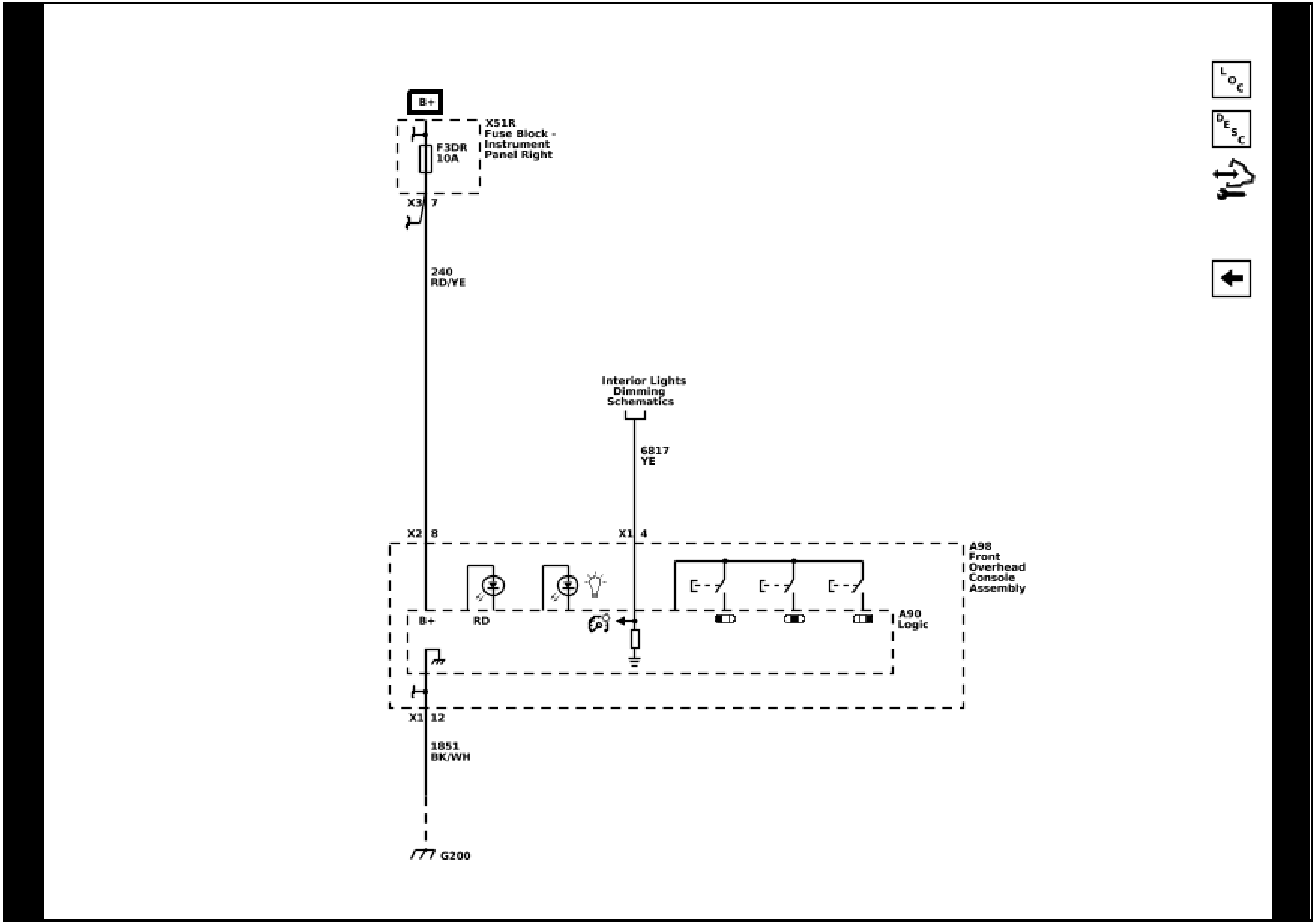

K77
Remote
Control
Door Lock
Receiver
T2
Antenna
A90
Logic
12V
4
3
2
1
3272
GY/WH
3275
BU/WH
3274
YE/GN
3273
GY
MIDDLE
PRODUCTION
EARLY/LATE
PRODUCTION
X299
X275
54
55
56
57
X2
25
X1
26
27
16
12V
K9
Body
Control
Module

5995595

Remote Function Schematics (Keyless Entry - Passive and Keyless Start)


B+
X51L
Fuse Block
- Instrument
Panel Left
F9DL
10A
40
48
(Not Used)
4340
RD/YE
Data Communication
Schematics
5060
GN
T10C
Keyless Entry
Antenna -
Left Front
Door Handle
A24D
Door
Handle
Assembly -
Driver
Exterior
T10D
Keyless
Entry
Antenna -
Right Front
Door Handle
A24P
Door
Handle
Assembly -
Passenger
Exterior
T10E
Keyless Entry
Antenna -
Rear
Compartment
BTM
3560
VT
3561
VT/GY
3562
GN/YE
3563
GN/BK
3568
BN/GN
3569
GN/GY
9
X500
X600
X138
X1
X2
B+
K84
Keyless
Entry
Control
Module
X225
X348
1151
BK/WH
3552
BN/BK
3553
WH
3554
BU
3555
GY/BK
D07
-D07
T10B
Keyless Entry
Antenna -
Instrument Panel
Compartment
T10J
Keyless Entry
Antenna - Center
Console Front
T10V
Keyless Entry Antenna -
Front Middle Seat
G300
5995596

Remote Function Schematics (Garage Door Opener (UG1))


B+
X51R
Fuse Block - Instrument Panel Right
F3DR
10A
X3 7
240
RD/YE
Interior Lights Dimming Schematics
6817
YE
X2 8
X1 4
A98
Front
Overhead
Console
Assembly
B+
RD
A90
Logic
X1 12
1851
BK/WH
G200

5995597

Description and Operation

Front Side Door Access Control Transmitter Description and Operation

Front Side Door Access Control Transmitter Description and Operation

The Front Side Door Access Control Transmitter is an accessory offered to be used as a vehicle entry device. Similar to the Keyless Entry Transmitter, the Front Side Door Access Control Transmitter will send a radio frequency signal to the Remote Control Door Lock Receiver. Next, the Remote Control Door Lock Receiver sends a signal to the Body Control Module (BCM) via LIN communication. The BCM will interpret this signal and either lock or unlock the vehicle as a result. A low transmitter battery or radio frequency interference from aftermarket devices, such as 2-way radios, power inverters, computers, etc., may cause a system malfunction. High radio frequency traffic areas, such as gas stations that use pay-at-the-pump radio frequency transponders, may also cause interference that could lead to a malfunction.

Like the Keyless Entry Transmitter, the Front Side Door Access Control Transmitter is programmed to the vehicle's Body Control Module. This means the Front Side Door Access Control Transmitter will populate one of the 8 programmable spaces in the BCM for Keyless Entry Transmitters. The Front Side Door Access Control Transmitter will need to be reprogrammed in the event of BCM replacement. This can only be achieved with the Master Code. If the Master Code is not retrievable, a new Front Side Door Access Control Transmitter with accompanying wallet card will need to be programmed to the new BCM.

The Front Side Door Access Control Transmitter has 5 buttons depicting numbers from 0 to 9. Each button represents a character of a 5 digit code that the vehicle owner may program, which will be referred to as a personal code. The user has 3 attempts to input the correct access code before the Front Side Door Access Control Transmitter enters lockout mode for 1 minute. This will occur up to 2 more times if the incorrect access code is entered repeatedly. After that, any additional 3 attempts will cause the Front Side Door Access Control Transmitter to enter lockout mode for 23 minutes. There is an LED light at the top of the Front Side Door Access Control Transmitter that provides feedback to the user. Each Front Side Door Access Control Transmitter is sold with a wallet card that contains a master code that may be used for keyless entry as well as programming a personal code. The master code will always allow operation of the Front Side Door Access Control Transmitter and may be used to program a new personal code. Entering the 5 digit access code will unlock the driver door. Pressing the 3/4 key within 5 seconds of entering the 5 digit access code with unlock all doors. Pressing the 7/8 and 9/0 button will lock all doors. To change the personal code, refer to the wallet card included with the Front Side Door Access Control Transmitter.

The Front Side Door Access Control Transmitter contains a button cell battery that is not serviceable. Once the battery exceeds the expected lifetime, the Front Side Door Access Control Transmitter will need to be replaced. A new Front Side Door Access Control Transmitter will come with new wallet card.

Garage Door Opener Description and Operation

The garage door opener is fixed and rolling code capable. Rolling code is a system that allows the code that the customers receiver receives from the garage door opener to change every time the garage door opener is used within operating range of the receiver. Rolling code programming requires the customer to push a learn/program button on the garage door opener receiver at their home. This button is usually located on the receiver unit under a cover (light cover) on one end of the unit. The customer must follow the garage door opener manufacturers instructions to program/learn the receiver to accept the Universal Home Remote System as an authorized opener for their unit . When the receiver and the garage door opener are initially programmed together, a code is established and a new code is created for every new transmission. The software in the receiver recognizes the garage door opener and accepts the new code.

The garage door opener is compatible with most, but not all types and brands of transmitters.

The garage door opener is a transmitter operating between 288–434 MHz. The power and range of the transmitter is limited to comply with laws governing the generation of radio frequency interference. The transmitter is programmed by the user to accept the signal generated by the user's transmitters.

The garage door opener has 3 buttons that may be programmed for individual transmitter/receiver combinations to control up to 3 garage door openers, security gates, lighting systems, etc. Each button represents a transmitter code section of the transmitter, which operates separately from any other button, and may be considered a separate transmitter. Operation consists of simply pressing a button to activate the corresponding transmitter.

The garage door opener does not need any programming after it is replaced. However, for the opener function it must be programmed to the customer's garage door or other devices such as a gate. The programming can only be performed at the device being programmed, it cannot be programmed at a service facility. Instructions for programming are listed in the Garage Door Opener Malfunction document in a Diagnostic Aid.

Note: Do not use the garage door opener (GDO) with any garage door opener that does not have the stop and reverse safety feature. This includes any garage door opener model manufactured before April 1, 1982.

Keyless Entry System Description and Operation

The keyless entry system is a vehicle entry device. The keyless entry system is used in conjunction with the door locks to unlock the vehicle. Keyless entry will lock/ unlock the vehicle doors or open the rear compartment lid when a corresponding button on the keyless entry transmitter is pressed. This is accomplished by the transmitter sending a radio frequency to the remote control door lock receiver antenna that has a direct link to the body control module (BCM). The BCM interprets the signal and activates the requested function or request the appropriate control module to activate the function via a serial data message. A low transmitter battery or radio frequency interference from aftermarket devices, such as 2-way radios, power inverters, computers, etc., may cause a system malfunction. High radio frequency traffic areas, such as gas stations that use pay-at-the-pump radio frequency transponders, may also cause interference that could lead to a malfunction. Keyless entry allows you to operate the following features:

- Door lock/unlock
- Liftgate lock/unlock, if equipped
- Trunk release, if equipped
- Power liftgate, if equipped
- Panic alarm/vehicle locator
- Remote vehicle starting, if equipped

The keyless entry system has the following components:

- Keyless entry transmitters
- Body control module
- Remote control door lock receiver

Keyless Entry Transmitters

Note: When the vehicle key is in the ignition, keyless entry functions from all keyless entry transmitter are disabled.

The keyless entry transmitters are used to perform various entry functions while away from the immediate are of the vehicle. Keyless entry functions may work at up to 20 m (65 ft) away from the vehicle. Ambient conditions may affect the performance of the keyless entry transmitter and reduce the range at which keyless entry functions operate. Up to eight transmitters may be programmed to a single vehicle. The keyless entry transmitter is an integral part of the vehicle key.

OnStar® Remote Link (if equipped)

A vehicle operator may have the ability to perform some of the keyless entry functions using applications on personal devices such as a smart phone. Unwanted or inadvertent door lock/unlock activation may be requested by the OnStar® Remote Link application. It is possible that a customer may be unaware of account usage, resulting in an unwanted or phantom door lock/ unlock. If normal system diagnosis results in an inability to verify the customer's concern, contact Technical Assistance Center (TAC).

Body Control Module (BCM)

The BCM is a multifunction module that operates the keyless entry system. When a radio frequency message is received from a keyless entry transmitter, the BCM interprets this signal and performs the specific function, i.e. door lock, door unlock, or vehicle locate.

Remote Control Door Lock Receiver

The remote control door lock receiver acts as an antenna for the keyless entry system and communicates with the BCM through a dedicated serial data link. When a button is pressed on a keyless entry transmitter, the remote control door lock receiver receives this signal and sends the request to the BCM. The BCM interprets the signal and performs the specific function, i.e. door lock, door unlock, or vehicle locate.

Unlock Doors

Momentarily press the transmitter UNLOCK button in order to perform the following functions:

- Unlock only the driver door or all doors and liftgate (if equipped); this is customized through the driver information center.
- Illuminate the interior lamps for a determined length of time or until the ignition is turned ON.
- Flash the exterior lights; this is customized through the driver information center.
- Disarm the content theft deterrent system, if equipped.
- Deactivate the content theft deterrent system when in the alarm mode.

Lock All Doors

Press the transmitter LOCK button to perform the following functions:

- Lock all vehicle doors.
- Immediately turn OFF the interior lamps.
- Flash the exterior lights and/or sound the horn; this is customized through the driver information center.
- Arm the content theft deterrent system.

Trunk Release, if equipped

Press the trunk release button on the transmitter to open the trunk.

Power Liftgate, if equipped

Press and hold the power liftgate button to perform the following functions:

- Open or close the liftgate using the power liftgate function.
- Flash the tail lamps.
- Sound the interior power liftgate chime.

Vehicle Locator/Panic Alarm

A single press of the panic button performs the following functions. Some functions may be dependent on personalization settings:

- Pulse the horn three times.
- Flash the exterior lamps three times.

A press and hold of the panic button performs the following functions:

- Illuminate the interior lamps.
- Pulse the horn and flash the exterior lamps for 30 seconds or until the following conditions occur:
  - The panic button is pressed.
  - The ignition switch is turned to the RUN position with a valid key.

Remote Vehicle Start, if equipped

The remote vehicle start function allows engine starting while not in the vehicle. It also allows the vehicle HVAC system and other vehicle systems to enable, providing a comfortable vehicle upon entry. The HVAC system will operate in the following possible ways:

- If the vehicle is equipped with a manual HVAC system it will be on and operating in the same way that the settings were adjusted when the vehicle was last used.
- If the vehicle is equipped with an automatic HVAC system it will operate as necessary to meet the temperature setting it was left at. If the conditions are such that the system needs AC, rear defrost, or defrost then those functions will operate. The indicator lights for these functions will not illuminate even if the features are on.
- If the vehicle is equipped with an automatic HVAC system but the system is in manual mode then it will operate the same as a manual system equipped vehicle with the HVAC operating however it was adjusted when the vehicle was last used.

The turn signal lamps will illuminate to indicate the vehicle has received the remote start request. Each time a remote vehicle start is performed, the vehicle doors are locked, however they may then be unlocked/locked with the transmitter at any time. Only the first and second vehicle transmitters are able to control the remote vehicle start function. Any additional remote transmitters programmed to the vehicle will perform all other remote functions. Once activated, the engine is allowed to run for 10 minutes. The remote vehicle start time may be extended by an additional 10 minutes by again pressing and releasing the lock button and then pressing and holding the remote vehicle start buttons on the transmitter. This feature is called a remote vehicle start continue and allows a maximum of 20 minutes of engine running. If the remote vehicle start continue is performed at 7 minutes into the initial 10 minute time-out, a total of 17 minutes of engine running would occur. The remote vehicle start event may be suspended at any time by pressing only the remote vehicle start button on the transmitter or by entering the vehicle and turning ON the hazard lamps.

In between ignition cycles, only two remote vehicle start events may occur or be attempted. Once two events or attempts have been made, future remote vehicle start events will be suspended until the vehicle is started using the ignition.

Enable/Disable Remote Vehicle Start

Using the driver information center, remote vehicle start may be enabled or disabled as a part of vehicle personalization. Refer to the vehicle owners manual for more information.

Hood Ajar Switch

The hood switch provides status of the hood to the BCM for remote vehicle start purposes. The switch is integrated into the hood latch assembly.

Remote Vehicle Start Circuit Description

The BCM receives a signal from the keyless entry transmitter indicating a remote vehicle start request. A message is then sent to the BCM which determines if a crank request message will be sent to the ECM to allow engine starting. To determine if conditions are correct for a remote vehicle start event, the BCM will ensure the following conditions are met:

- A valid hood ajar switch closed signal is present.
- The doors are locked.
- The low fuel warning light is off.
- The hazard switch is OFF.
- The vehicle power mode is correct.
- No content theft deterrent alarm triggers are present.

When the BCM determines all conditions meet those required for a remote vehicle start event, a message is sent via serial data to the ECM. The ECM relies on the remote vehicle start message from the BCM to enable remote vehicle start when the crank request signal is received. If the ECM does not receive a valid remote vehicle start message, it will not attempt to start the engine. While the ECM is in remote vehicle start mode it will suspend engine operation if any of the following additional conditions occur:

- Vehicle speed is greater than 0
- Transmission is not in PARK
- Excessive engine coolant temperature
- Low oil pressure
- The malfunction indicator lamp (MIL) is commanded ON
- Engine crank time is greater than 30 seconds
- Excessive engine speed
- Accelerator pedal position too high
- Remote start timer equals 0
- Immobilizer system indicates tamper

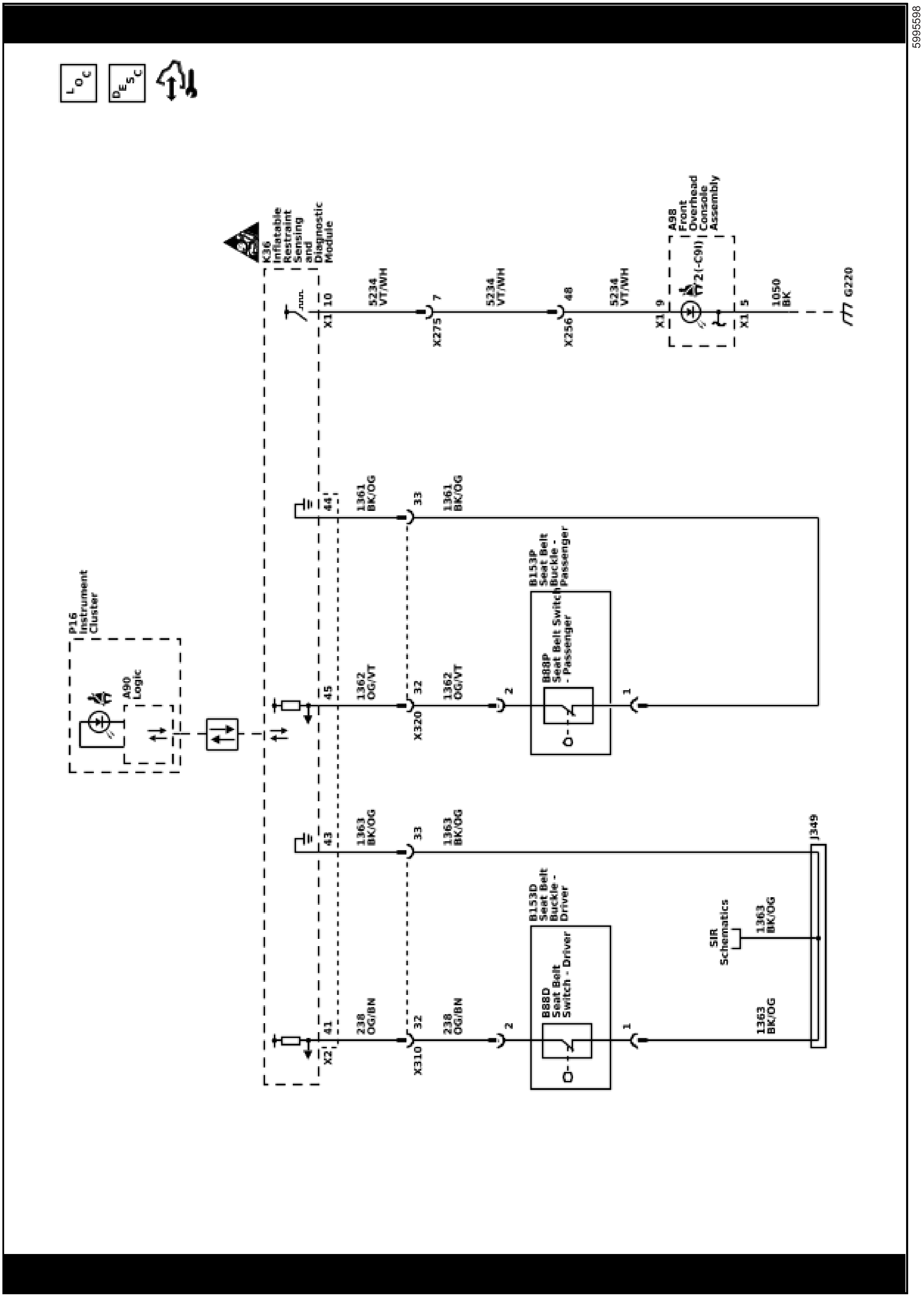
Keyless Entry Personalization

Vehicle lock/unlock functions and remote vehicle start settings may be personalized. For functional descriptions and personalization instructions, refer to the vehicle owners manual.

Seat Belts

Schematic and Routing Diagrams

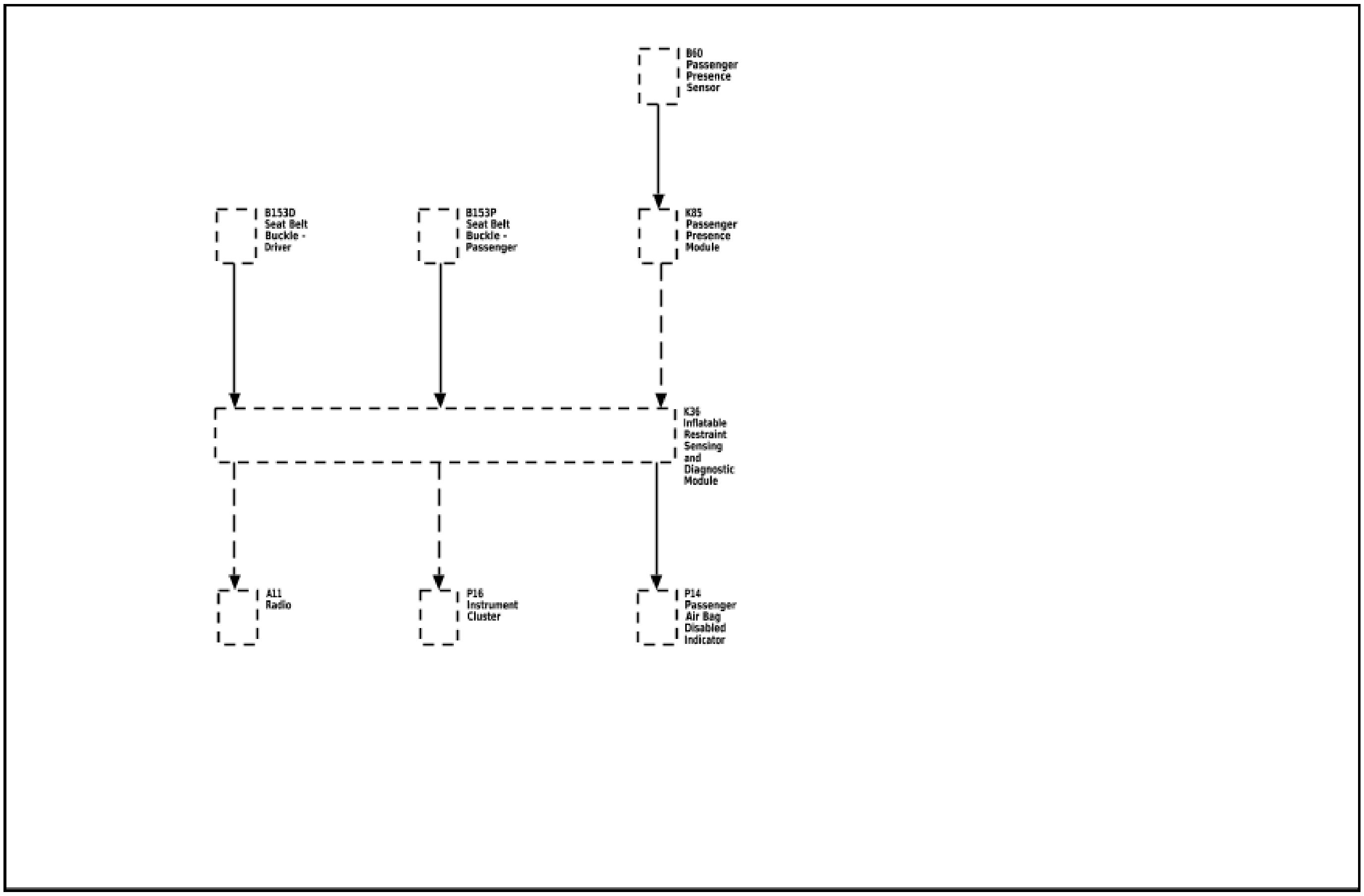
Seat Belt Schematics (Seat Belts)


5995598
P16
Instrument
Cluster
A90
Logic
K36
Inflatable
Restraint
Sensing
and
Diagnostic
Module
X2
41
43
45
44
X1
10
238
OG/BN
1363
BK/OG
1362
OG/VT
1361
BK/OG
5234
VT/WH
X310
32
33
X320
X275
7
X256
48
B153D
Seat Belt
Buckle -
Driver
B88D
Seat Belt
Switch - Driver
B153P
Seat Belt
Buckle -
Passenger
B88P
Seat Belt Switch
- Passenger
2
1
SIR
Schematics
J349
A98
Front
Overhead
Console
Assembly
9
5
2(-C9I)
1050
BK
G220

Description and Operation

Seat Belt System Description and Operation

Seat Belt with P14 Block Diagram


B60
Passenger
Presence
Sensor
B153D
Seat Belt
Buckle -
Driver
B153P
Seat Belt
Buckle -
Passenger
K85
Passenger
Presence
Module
K36
Inflatable
Restraint
Sensing
and
Diagnostic
Module
A11
Radio
P16
Instrument
Cluster
P14
Passenger
Air Bag
Disabled
Indicator

3513718

Note: Not all items shown in block diagram are available in this publication

Restraint System

Note: If the vehicle has been in a collision, refer to Repairs and Inspections Required After a Collision.

The vehicle has front and rear seat belts that are the primary means of occupant restraint. Seat belts help to keep the occupants inside the passenger compartment and to gradually reduce the impact forces during the following events:

- Frontal impact type crashes
- Rear impact type crashes
- Side impact type crashes
- Roll-over type crashes

All seat belt retractors have emergency locks. The retractors remain unlocked during normal operation and under normal driving conditions. The retractors remain unlocked during normal conditions in order to allow free movement of the upper body of each occupant.
A pendulum locks the seat belt webbing into position. The pendulum causes a locking bar to engage a cog on the spool of the retractor mechanism when the following conditions occur:

- A rapid extraction of the seat belt webbing from the retractor
- An abrupt change in vehicle speed
- An abrupt change in vehicle direction
- Operation of the vehicle on a steep upgrade
- Operation of the vehicle on a downgrade

The seat belts have an automatic locking (cinch) feature. The cinch feature is activated when the seat belt webbing is completely extended from the retractor. The cinch feature prevents the webbing from extending beyond the position from which it is allowed to retract. Use of the cinch feature is recommended for securing a child seat. The cinch feature may be cancelled by allowing the webbing to wind back completely into the retractor. After the cinch feature is cancelled, the webbing is unlocked. After the cinch feature is cancelled, the webbing will extend from the retractor.
This vehicle is also equipped with a supplemental inflatable restraint (SIR) system. Refer to *Supplemental Inflatable Restraint System Description and Operation on page 7-31*

Motorized Seat Belts

A motorized seat belt is a seat belt with a motor coupled to the shoulder belt retractor. The motorized seat belt provides the driver and passenger a sense of safety and, in the case of severe braking or a crash, more quickly couples the occupant to the vehicle, enhancing the safety to the occupant.

Motorized seat belts monitor vehicle information to determine when to perform each of the following retractions

- Full retraction for such situations but not limited to: panic braking and or skidding
- Dynamic support for lateral and longitudinal dynamics

Preconditions for motorized seat belt retractions

- Seat belt buckle is latched
- Vehicle speed greater than or equal to 25 kph (16 mph)
- All messages on serial data are received as valid

Triggers that may cause motorized seat belt retractions

- Emergency Braking
- Sudden Emergency / Panic Braking
- High Vehicle Deceleration Detection
- Ice Braking Detection
- Oversteer and Understeer

Motorized seat belt inputs

- Vehicle Power Mode
- Transmission Gear
- Wheel Speeds
- Vehicle Acceleration
- Accelerator Pedal Position
- Steering Wheel Angle and Gradient
- Yaw Rate and Lat/Long Acceleration
- Brake Pedal Position, Gradient, Pressure, Initial Travel
- Vehicle Stability

Motorized seat belt output signals

- Driver information center message – motorized seat belt Failed “Service Automatic Seatbelt Tightening”
- Driver information center message – motorized seat belt Unavailable “Automatic Seatbelt Tightening Unavailable”

Motorized seat belt retractions are inhibited when seat belt unbuckled

Driver and passenger motorized seat belts operate independently

Front Seat Belt System

The front seat belt system includes a driver and passenger seat belt pretensioner retractor. Both front seat belt pretensioners includes a seat belt switch in the seat buckle which controls a reminder lamp and a tone alarm.

Note: The front passenger seat is equipped with a passenger presence detection sensor, which detects an occupant. If the passenger presence detection sensor detects an empty front passenger seat, then the passenger fasten safety belt indicator will be disabled.

- When the driver seat belt is buckled and the ignition switch is turned ON, the following events will occur:
  - – The tone alarm will not operate.
  - – The reminder lamp will not operate.
- When the driver seat belt is not buckled and the ignition switch is in the ON position, the following events will occur:
  - – The tone alarm will operate for 4–8 seconds and then go OFF.
  - – The fasten safety belt indicator will turn ON for 20 seconds, until the driver seat belt is buckled.

Rear Seat Belt System

The Rear Seat Belt System includes the following components:

- The rear seat belt retractor is located at the wheelhouse panel and attached to the floor panel by the rear seat shoulder belt retractor bracket.
- The rear seat belt buckles and the center seat belt buckle are attached to each seat.

Child Seat Restraint System

Warning:* *A child in a rear-facing child restraint can be seriously injured if the front passenger air bag inflates, because the back of a rear-facing child restraint would be very close to the inflating air bag. NEVER use a rear-facing child restraint in this vehicle. If a forward-facing child restraint is suitable for your child, ALWAYS move the front passenger seat as far back as it will go and then install the child restraint. Be sure the child restraint position does not conflict with any additional requirements provided by the manufacturer. For more information, refer to the vehicle owner’s manual and the instructions that came with the child restraint.

A child in a rear-facing child restraint can be seriously injured if the right-front passengers air bag inflates. This is because the back of a rear-facing child restraint would be very close to the inflating air bag. NEVER use a rear-facing child restraint in this vehicle. If a forward-facing child restraint is suitable for your child, ALWAYS move the front passenger seat as far back as it will go and then install the child restraint. Be sure the child restraint position does not conflict with any additional requirements provided by the manufacturer. For more information, refer to the vehicle owners manual and the instruction that came with the child restraint.

The child seat may only be used in a forward facing seating location. The child seat should be installed and secured according to the manufacturer's directions.
If the child seat has a top strap, the seat will need to be anchored. Passengers should not be allowed to sit at locations where the seat belts are being used to secure the child seat.

All vehicles are equipped with a dual-mode type retractor with emergency and automatic locking features. The automatic locking feature is for restraint of a child seat. The child seat can be secured by pulling the seat belt all the way out to lock it. Then tighten the seat belt around the child seat.

If a child seat is to be used in the second seat position, a special dealer-installed anchor must be used in order to anchor the child seat top strap. This only applies to the seats designed with the top strap provision and for the vehicles sold in Canada. In order to ensure the correct top strap angle, the child seat is only to be used at the seating position for which the top strap anchor is installed.

Fasten Safety Belt Indicators

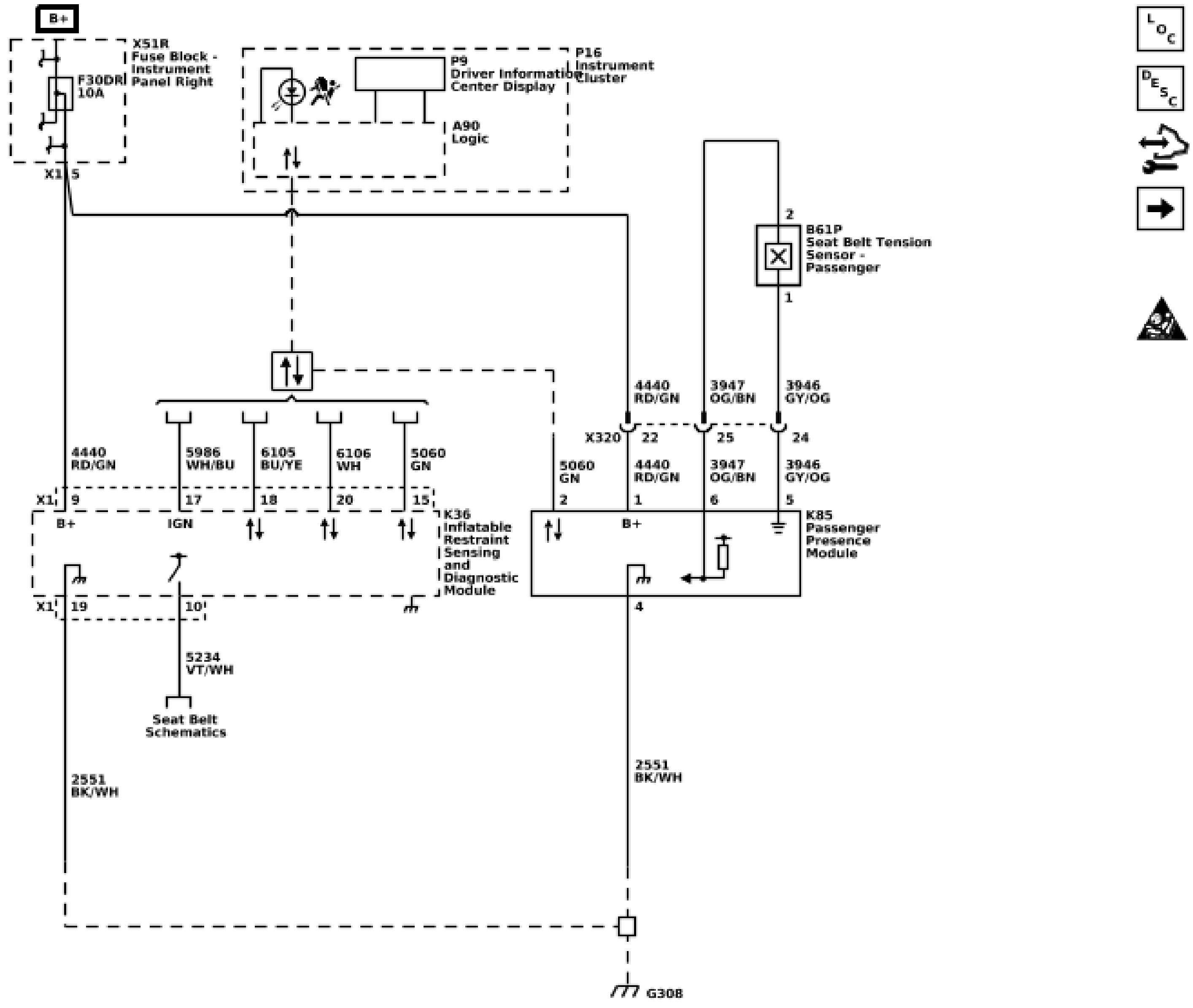
There is a fasten safety belt indicator for this vehicle. The driver fasten safety belt reminder is displayed in the instrument cluster. The fasten safety belt indicator may only be ON during RUN. The fasten safety belt indicator illuminates under the following conditions:

- During the bulb check
- The inflatable restraint sensing and diagnostic module (SDM) sends the status of the driver seat belt to the instrument cluster via serial data. If any of the seat belts are unfastened, the instrument cluster will send a message requesting a chime sound to be turned ON after a bulb check.

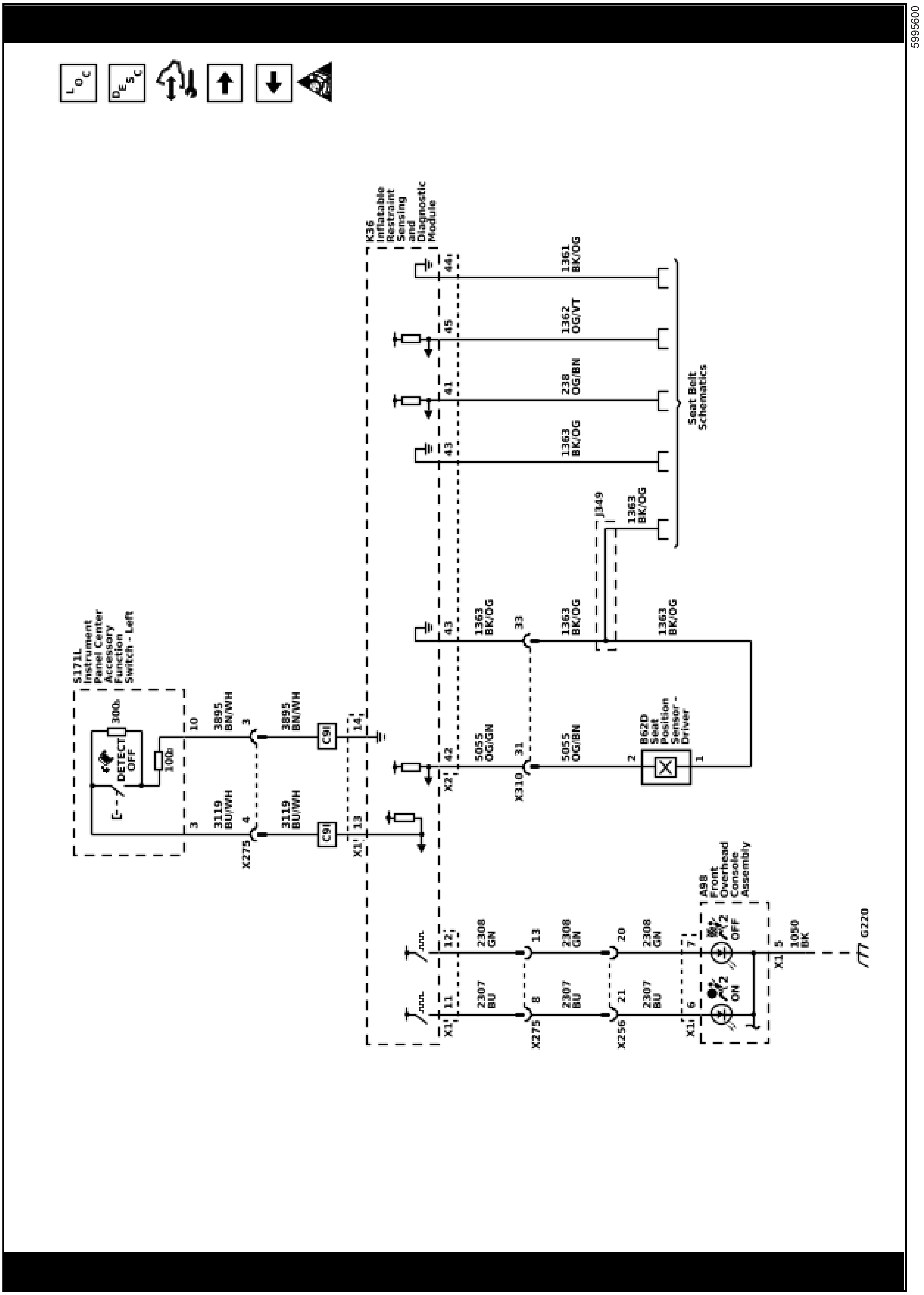
Supplemental Restraints

Schematic and Routing Diagrams

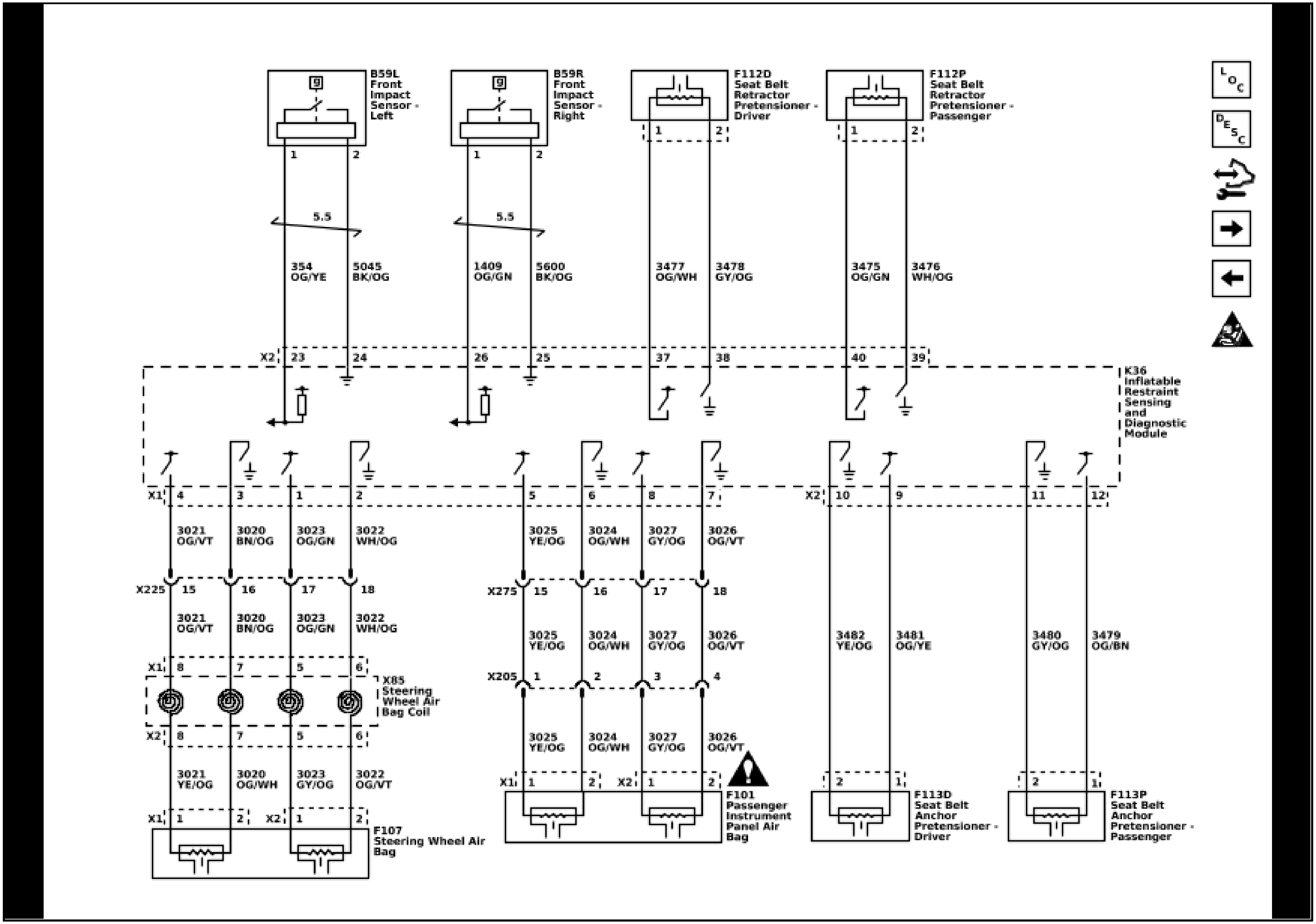
SIR Schematics (Power, Ground, Serial Data and Passenger Presence)


B+
X51R
Fuse Block - Instrument Panel Right
F30DR
10A
X1 5
P16
Instrument Cluster
P9
Driver Information Center Display
A90
Logic
B61P
Seat Belt Tension Sensor - Passenger
2
1
4440
RD/GN
3947
OG/BN
3946
GY/OG
X320 22
25
24
5986
WH/BU
6105
BU/YE
6106
WH
5060
GN
X1 9
17
18
20
15
B+
IGN
K36
Inflatable Restraint Sensing and Diagnostic Module
X1 19
10
5234
VT/WH
Seat Belt Schematics
2551
BK/WH
2
1
6
5
K85
Passenger Presence Module
4
G308
5995599

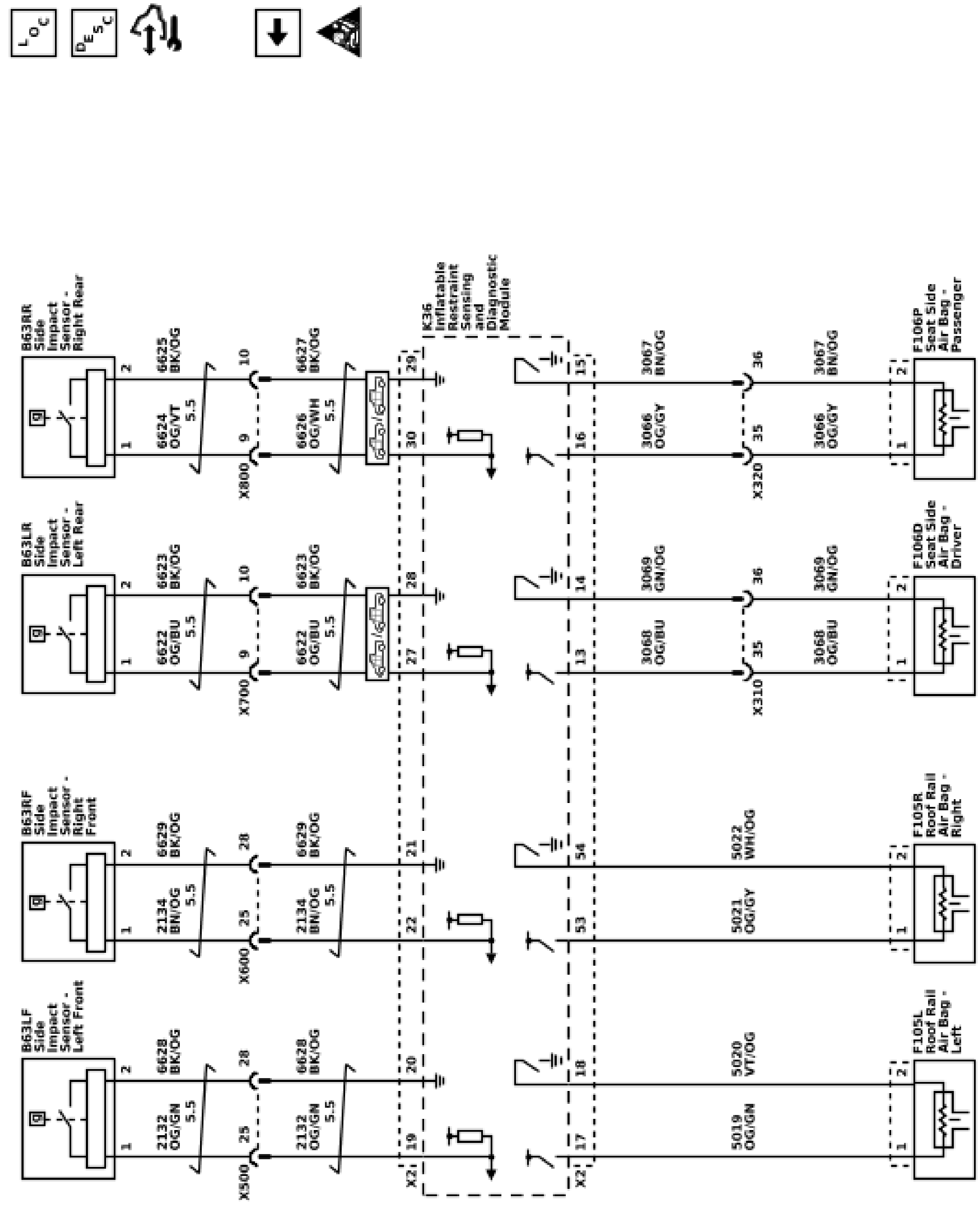
SIR Schematics (Seat Position, Disable Switch, and Indicators)


5995600
K36 Inflatable Restraint Sensing and Diagnostic Module
44
45
41
43
1361 BK/OG
1362 OG/VT
238 OG/BN
1363 BK/OG
Seat Belt Schematics
J349
S171L Instrument Panel Center Accessory Function Switch - Left
DETECT OFF
300Ω
100Ω
10
3
3895 BN/WH
3119 BU/WH
4
X275
C9I
14
13
X1
42
X2
5055 OG/GN
31
33
X310
5055 OG/BN
B62D Seat Position Sensor - Driver
2
1
12
11
2308 GN
2307 BU
8
X256
20
21
7
6
A98 Front Overhead Console Assembly
ON
OFF
5
1050 BK
G220

SIR Schematics (Frontal Impact Sensing and Deployment)


B59L Front Impact Sensor - Left
B59R Front Impact Sensor - Right
F112D Seat Belt Retractor Pretensioner - Driver
F112P Seat Belt Retractor Pretensioner - Passenger
5.5
354 OG/YE
5045 BK/OG
1409 OG/GN
5600 BK/OG
3477 OG/WH
3478 GY/OG
3475 OG/GN
3476 WH/OG
X2 23 24 26 25 37 38 40 39
K36 Inflatable Restraint Sensing and Diagnostic Module
X1 4 3 1 2 5 6 8 7
X2 10 9 11 12
3021 OG/VT
3020 BN/OG
3023 OG/GN
3022 WH/OG
3025 YE/OG
3024 OG/WH
3027 GY/OG
3026 OG/VT
X225 15 16 17 18
X275 15 16 17 18
3482 YE/OG
3481 OG/YE
3480 GY/OG
3479 OG/BN
X1 8 7 5 6
X85 Steering Wheel Air Bag Coil
X2 8 7 5 6
X205 1 2 3 4
3021 YE/OG
3020 OG/WH
3023 GY/OG
3022 OG/VT
X1 1 2 X2 1 2
F107 Steering Wheel Air Bag
F101 Passenger Instrument Panel Air Bag
F113D Seat Belt Anchor Pretensioner - Driver
F113P Seat Belt Anchor Pretensioner - Passenger
5995601

SIR Schematics (Side Impact Sensing and Deployment)


B63LF Side Impact Sensor - Left Front
B63RF Side Impact Sensor - Right Front
B63LR Side Impact Sensor - Left Rear
B63RR Side Impact Sensor - Right Rear
2132 OG/GN 5.5
6628 BK/OG
2134 BN/OG 5.5
6629 BK/OG
6622 OG/BU 5.5
6623 BK/OG
6624 OG/VT 5.5
6625 BK/OG
6626 OG/WH 5.5
6627 BK/OG
X500
X600
X700
X800
X310
X320
X2
K36 Inflatable Restraint Sensing and Diagnostic Module
5019 OG/GN
5020 VT/OG
5021 OG/GY
5022 WH/OG
3068 OG/BU
3069 GN/OG
3066 OG/GY
3067 BN/OG
F105L Roof Rail Air Bag - Left
F105R Roof Rail Air Bag - Right
F106D Seat Side Air Bag - Driver
F106P Seat Side Air Bag - Passenger

5995602

Description and Operation

Supplemental Inflatable Restraint System Description and Operation

SIR System Overview

The supplemental inflatable restraint (SIR) system supplements the protection offered by the seat belts. The SIR system contains an Inflatable Restraint Sensing and Diagnostic Module (SDM), air bags, seat belt pretensioner (anchor and retractor), and impact sensors. The Inflatable Restraint Sensing and Diagnostic Module determines the severity of a collision with the assistance of impact sensors located at strategic points on the vehicle. When the Inflatable Restraint Sensing and Diagnostic Module detects a collision, the Inflatable Restraint Sensing and Diagnostic Module will process the information provided by the sensors to further support air bag or pretensioner deployment. The Inflatable Restraint Sensing and Diagnostic Module will deploy the air bags and pretensioners if it detects a collision of sufficient force. If the force of the impact is not sufficient to warrant air bag deployment, the Inflatable Restraint Sensing and Diagnostic Module may still deploy the seat belt pretensioners. The Inflatable Restraint Sensing and Diagnostic Module contains a sensing device that converts vehicle velocity changes to an electrical signal. The Inflatable Restraint Sensing and Diagnostic Module compares these signals to values stored in memory. If the signals exceed a stored value, the Inflatable Restraint Sensing and Diagnostic Module will determine the severity of the impact and either cause current to flow through the frontal deployment loops deploying the frontal air bags and pretensioners, or it will deploy the pretensioners only. The Inflatable Restraint Sensing and Diagnostic Module continuously monitors the deployment loops for malfunctions and illuminates the SIR system AIR BAG indicator if a fault is detected. The Inflatable Restraint Sensing and Diagnostic Module performs continuous diagnostic monitoring of the SIR system electrical components. Upon detection of a circuit malfunction, the Inflatable Restraint Sensing and Diagnostic Module will set a DTC and inform the driver by illuminating the SIR system AIR BAG indicator. The steering column and knee bolsters are designed to absorb energy and compress during frontal collisions in order to limit leg movement and decrease the chance of injury to the driver and passenger.

SIR System AIR BAG Indicator

The SIR system AIR BAG indicator, located in the instrument cluster, is used to notify the driver of SIR system malfunctions and to verify that the Inflatable Restraint Sensing and Diagnostic Module (SDM) is communicating with the instrument cluster. When the ignition is turned ON, the Inflatable Restraint Sensing and Diagnostic Module is supplied with ignition positive voltage. The instrument cluster will momentarily turn on the SIR system AIR BAG indicator steady for 8 seconds. While the indicator is on, the Inflatable Restraint Sensing and Diagnostic Module conducts tests on all SIR system components and circuits. If no malfunctions are detected the Inflatable Restraint Sensing and Diagnostic Module will communicate with the instrument cluster through the serial data circuit and command the SIR system AIR BAG indicator OFF. The Inflatable Restraint Sensing and Diagnostic Module provides continuous monitoring of the air bag circuits by conducting a sequence of checks. If a malfunction is detected the Inflatable Restraint Sensing and Diagnostic Module will store a diagnostic trouble code (DTC) and command the instrument cluster to illuminate the SIR system AIR BAG indicator via serial data. The presence of a SIR system malfunction could result in non-deployment of the air bags or deployment in conditions less severe than intended. The SIR system AIR BAG indicator will remain ON until the malfunction has been repaired.

Inflatable Restraint Sensing and Diagnostic Module (SDM)

The Inflatable Restraint Sensing and Diagnostic Module (SDM) is a microprocessor and the control center for the supplemental inflatable restraint (SIR) system. The Inflatable Restraint Sensing and Diagnostic Module contains internal sensors along with external impact sensors, mounted at strategic locations on the vehicle. In the event of a collision, the Inflatable Restraint Sensing and Diagnostic Module compares the signals from the internal and external impact sensors to a value stored in memory. When the generated signals exceed the stored value, the Inflatable Restraint Sensing and Diagnostic Module will cause current to flow through the appropriate deployment loops to deploy the air bags. The Inflatable Restraint Sensing and Diagnostic Module records the SIR system status when a deployment occurs and illuminates the SIR system AIR BAG indicator located in the instrument cluster. The Inflatable Restraint Sensing and Diagnostic Module performs continuous diagnostic monitoring of the SIR system electrical components and circuitry when the ignition is turned ON. If the Inflatable Restraint Sensing and Diagnostic Module detects a malfunction, a DTC will be stored and the Inflatable Restraint Sensing and Diagnostic Module will request the instrument cluster to illuminate the SIR system AIR BAG indicator, notifying the driver that a malfunction exists. In the event that ignition positive voltage is lost during a collision, the Inflatable Restraint Sensing and Diagnostic Module maintains a 23-volt loop reserve for deployment of the air bags. It is important when disabling the SIR system for servicing or rescue operations to allow the 23-volt loop reserve to dissipate, which could take up to 1 minute.

Air Bags

This vehicle contains 7 air bags. The 7 air bags are located in the steering wheel (dual air bags), instrument panel (passenger side) (dual air bags), driver side seat inboard side, driver side seat outboard side, passenger side (seat), left roof rail, right roof rail. To view the locations of the air bags refer to *Master Electrical Component List on page 6-922*. Air bags contain a housing, inflatable air bag, two initiating devices (if dual air bags), canister of gas generating material and, in some cases, stored compressed gas. The deployment loops supply current to deploy the air bags. The steering wheel and passenger instrument panel air bags have two stages of deployment, which varies the amount of restraint to the occupant according to the collision severity. For moderate frontal collisions the air bags deploy at less than full deployment which consists of stage 1. For more severe frontal collisions a full deployment is initiated which consists of stage 1 and stage 2 of the air bags. The current passing through the air bags ignite the material in the canister producing a rapid generation of gas and is some cases, the release of compressed gas. The gas produced from this reaction rapidly inflates the air bag. Once the air bag is inflated it quickly deflates through the air bag vent holes and/or the bag fabric. A shorting bar (if equipped) is located in the connector.

Seat Belt Pretensioner (Anchor and Retractor)

The seat belt pretensioner (driver and passenger) consist of a housing, seat belt retractor (located in the B-pillar), seat belt anchor (located in the seat), seat belt webbing, an initiator, and a canister of gas generating materials. To view the locations of the seat belt pretentioners refer to *Master Electrical Component List on page 6-922*. The initiator is part of the seat belt pretensioner deployment loop. When the vehicle is involved in a collision of sufficient force, the Inflatable Restraint Sensing and Diagnostic Module causes current to flow through the seat belt deployment loops to the initiator. Current passing through the initiator ignites the material in the canister producing a rapid generation of gas. The gas produced from this reaction deploys the seat belt pretensioners which removes all of the slack in the seat belts. Depending on the severity of the collision, the seat belt pretensioners may deploy without the frontal air bags deploying, or they will deploy immediately before the frontal air bags deploy. A shorting bar (if equipped) is located in the connector.

Impact Sensors

There are multiple impact sensors which may be located in the front of the vehicle, in the front doors or on the B-pillar, and on the C-pillar depending on the vehicle configuration. To view the locations of the impact sensors refer to *Master Electrical Component List on page 6-922*. The front of vehicle, B-pillar, and C-pillar impact sensors contain a sensing device which monitors vehicle acceleration to detect collisions that are severe enough to warrant air bag deployment. The front door impact sensors contain a sensing device which monitors the door cavity air pressure change to detect side collisions that are severed enough to warrant air bag deployment. It is important when working on components in the door to make sure any items which have a sealing impact on the door (water deflector, exterior door handle, speaker, door harness grommet, or sealing strip) are securely fastened when reinstalled. The impact sensors are not part of the deployment loop, but instead provide input to the Inflatable Restraint Sensing and Diagnostic Module (SDM). The Inflatable Restraint Sensing and Diagnostic Module contains a microprocessor that performs calculations using the measured inputs from acceleration and pressure sensors. When the generated calculations exceed the stored value, the Inflatable Restraint Sensing and Diagnostic Module will cause current to flow through the deployment loops deploying the appropriate air bags.

Passenger Presence System and Passenger Air Bag Indicator (If Equipped)

Note: Note: The passenger presence system is a calibrated unit. When replacing the assembly all parts in the service kit must remain together. Do not mix any of the old parts with the new parts.

The passenger presence system is used to monitor the weight of an occupant in the front passenger seat and communicate the status to the inflatable restraint sensing and diagnostic module (SDM) whether to enable or suppress the deployment of the passenger instrument panel air bag. The passenger presence system consist of an passenger presence module , silicone filled sensor pad, passenger seat belt tension sensor, wiring harness, and PASSENGER AIR BAG ON/OFF indicators. The silicone filled sensor pad is located under the passenger seat foam cushion and is connected by a hose clamped to the passenger presence module. The weight of the occupant sitting in the front passenger seat is measured as a pressure change within the bladder by the passenger presence module. If the pressure from the occupants weight is less than a specified value, the passenger presence module will send a suppress signal to the inflatable restraint sensing and diagnostic module to disable the passenger instrument panel air bag. If the pressure from the occupants weight is higher than a specified value, the passenger presence module will send an enable signal to the inflatable restraint sensing and diagnostic module to enable the passenger instrument panel air bag. The inflatable restraint sensing and diagnostic module will notify the customer of the enable/disable status by turning ON one of the PASSENGER AIR BAG ON/OFF. The passenger presence system monitors itself for faults and will displays diagnostic trouble codes (DTCs) on the scan tool. When a fault is detected, the passenger presence module sends out a message to the inflatable restraint sensing and diagnostic module. The inflatable restraint sensing and diagnostic module responds by sending a command message to the instrument cluster to illuminate the SIR system AIR BAG indicator.

Seat Belt Indicators

The seat belt indicators are controlled through the Inflatable Restraint Sensing and Diagnostic Module (SDM). For further information on seat belt indicators refer to *Seat Belt System Description and Operation on page 7-23*

Section 8

Transmission

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Shift Lock Control 8-7
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    Automatic Transmission Shift Lock Control Description and Operation 8-9

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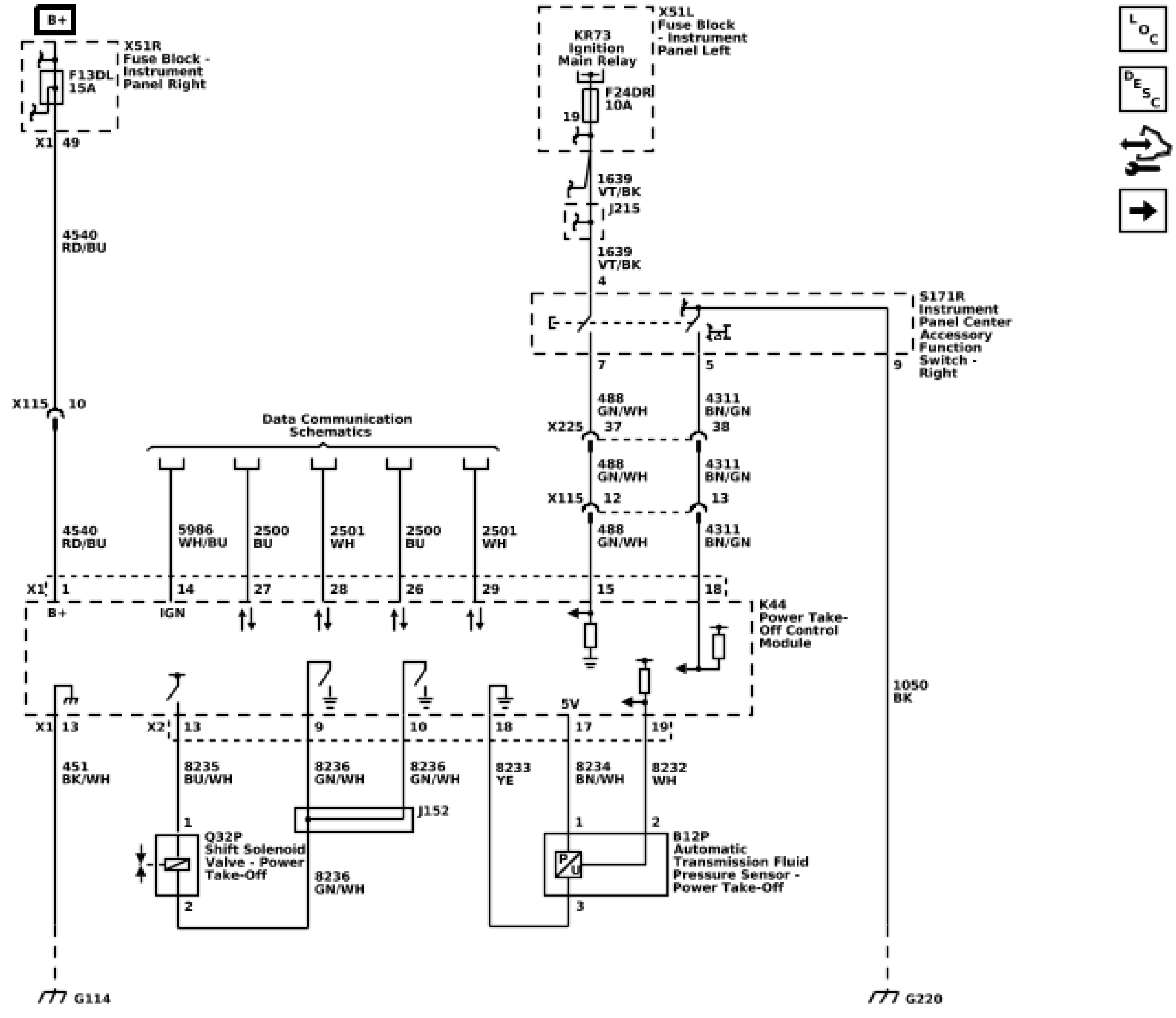
Power Take-Off

Schematic and Routing Diagrams

Power Take-Off (PTO) Schematics (Power, Ground, Serial Data and Enable (PTO))


B+
X51R Fuse Block - Instrument Panel Right
F13DL 15A
X1 49
4540 RD/BU
X115 10
4540 RD/BU
X51L Fuse Block - Instrument Panel Left
KR73 Ignition Main Relay
F24DR 10A
19
1639 VT/BK
J215
1639 VT/BK
4
S171R Instrument Panel Center Accessory Function Switch - Right
7
5
9
488 GN/WH
4311 BN/GN
X225 37
38
488 GN/WH
4311 BN/GN
X115 12
13
488 GN/WH
4311 BN/GN
Data Communication Schematics
5986 WH/BU
2500 BU
2501 WH
2500 BU
2501 WH
X1 1
14
27
28
26
29
15
18
B+
IGN
K44 Power Take-Off Control Module
5V
1050 BK
X1 13
X2 13
9
10
18
17
19
451 BK/WH
8235 BU/WH
8236 GN/WH
8236 GN/WH
8233 YE
8234 BN/WH
8232 WH
J152
1
2
Q32P Shift Solenoid Valve - Power Take-Off
8236 GN/WH
1
2
3
P U
B12P Automatic Transmission Fluid Pressure Sensor - Power Take-Off
G114
G220
L O C
D E S C

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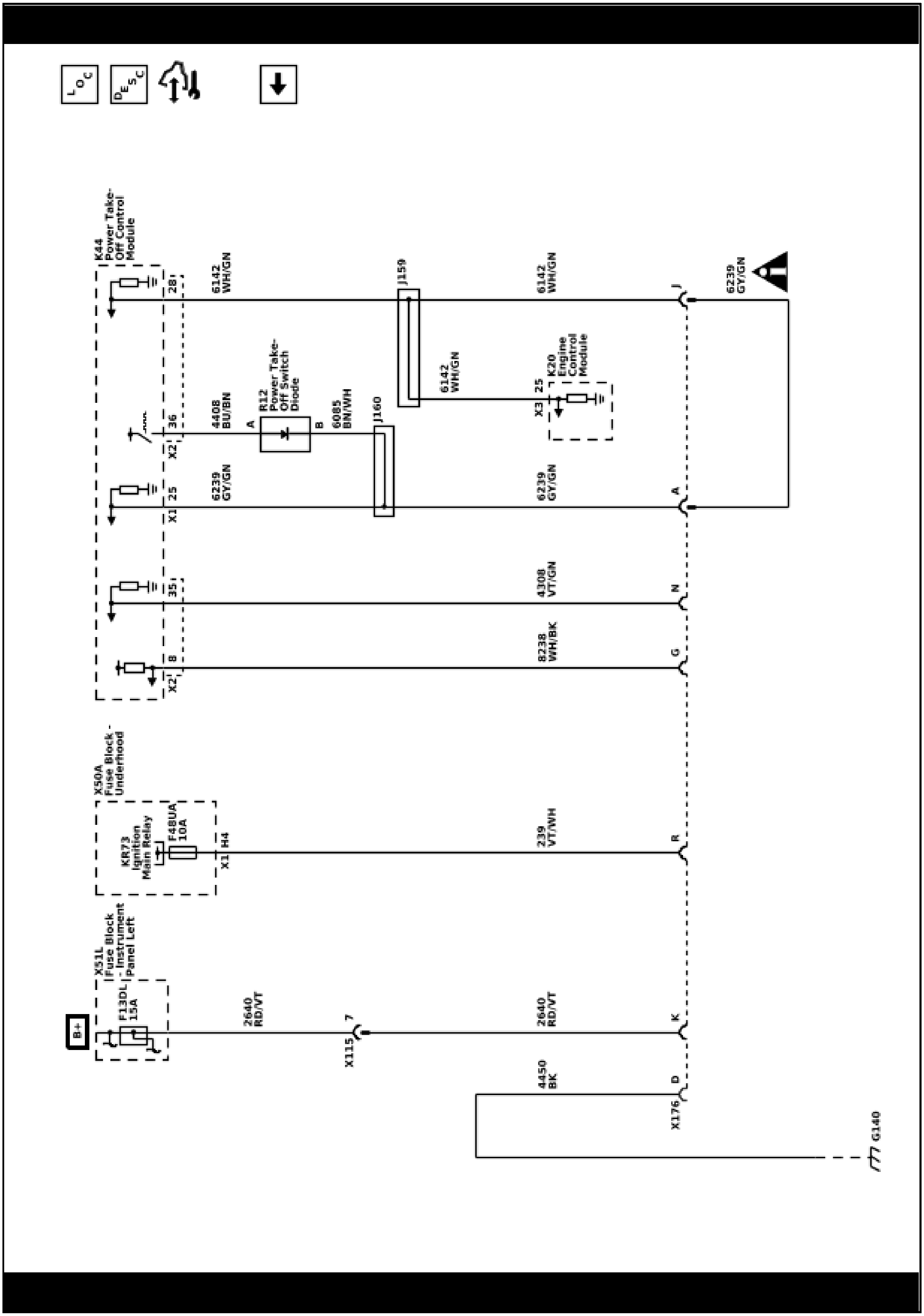
Power Take-Off (PTO) Schematics (Provisional Connector (PTO))


5995628
B+
X51L Fuse Block - Instrument Panel Left
F13DL 15A
2640 RD/VT
X115 7
X50A Fuse Block - Underhood
KR73 Ignition Main Relay
F48UA 10A
X1 H4
239 VT/WH
K44 Power Take-Off Control Module
X2 8
8238 WH/BK
35
4308 VT/GN
X1 25
6239 GY/GN
X2 36
4408 BU/BN
R12 Power Take-Off Switch Diode
A
B
6085 BN/WH
J160
28
6142 WH/GN
J159
K20 Engine Control Module
X3 25
X176
D
K
R
G
N
A
J
4450 BK
G140

Description and Operation

Power Take-Off (PTO) Description and Operation

Power Take-Off System

The Power Take-Of (PTO) is a General Motors (GM) Upfitter integrated system that creates an auxiliary power source for running add-on equipment, such as salt spreaders, snow plows, winches, and lift buckets. It controls engine speed to values higher than normal base idle, PTO integral clutch engagement, and remote starting and shutdown of the engine.

For specific information on how to set up and operate the Power Take Off system refer to the vehicle's owners manual and the GM Upfitter website.

PTO Components

The Original Equipment Manufacturer (OEM) PTO components consist of:

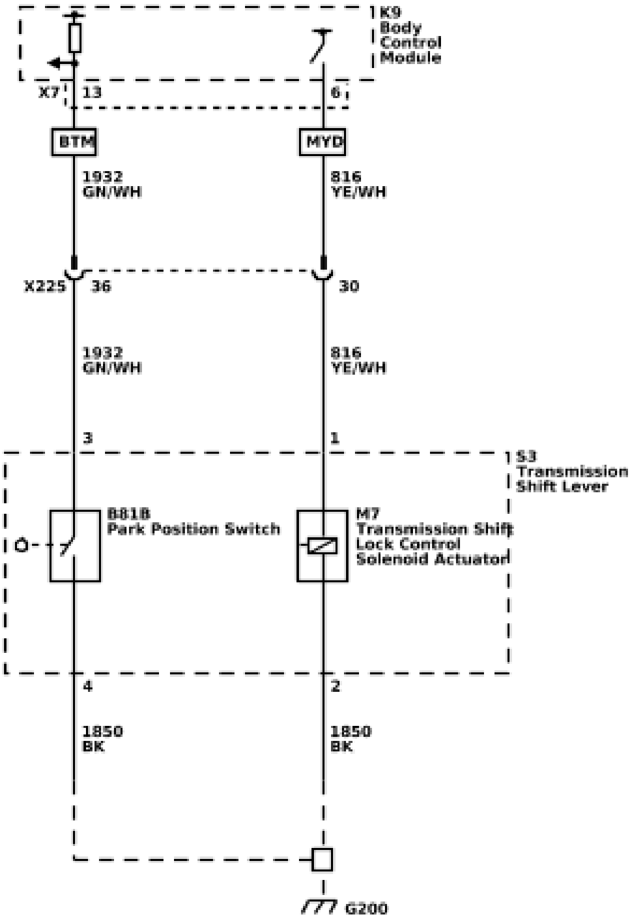
- The transmission (internal) PTO gear which rotates with the torque converter
- The In-cab PTO switch and cruise control SET and RES switches
- The PTO telltale indicator
- The Driver Information Center (DIC)
- The Radio and Navigation Screen (HMI)
- The Power Take-Off Module
- The PTO Unit
- The On/Off Solenoid
- The Pressure Sensor
- The Remote PTO Upfitter connector X176

Note: The interface connector X176 is located underneath the cab, near the left frame rail and comes with a cap which is the mating half to the truck harness connector. This is the connector the Upfitter will use to wire in necessary external electrical components such as external switches to control the PTO from outside the cab.

Shift Lock Control

Schematic and Routing Diagrams

Shift Lock Control Schematics (Shift Lock Control)


K9
Body
Control
Module
X7
13
6
BTM
MYD
1932
GN/WH
816
YE/WH
X225
36
30
1932
GN/WH
816
YE/WH
3
1
S3
Transmission
Shift Lever
B818
Park Position Switch
M7
Transmission Shift
Lock Control
Solenoid Actuator
4
2
1850
BK
1850
BK
G200
5995629

Description and Operation

Automatic Transmission Shift Lock Control Description and Operation

The Automatic Transmission Shift Lock Control System is a safety device that prevents an inadvertent shift out of PARK when the engine is running. The driver must press the brake pedal before moving the shift lever out of the PARK position. The system consists of the following components:

- The Automatic Transmission Shift Lock Solenoid (serviced as the Automatic Transmission Shift Lock Actuator)
- The Body Control Module (BCM)
- The Engine Control Module (ECM)

The BCM controls the voltage to the shift lock control solenoid though the shift lock control solenoid controlled voltage circuit. The following conditions must be met before the BCM will supply voltage to the shift lock control solenoid:

- The ignition is in the ON position.
- The ECM sends an input via GMLAN serial data to the BCM when the Transmission Control Module (TCM) indicates the transmission is in the PARK position.
- The BCM receives a brake applied input from the stop lamp switch.

Since the shift lock control solenoid is permanently grounded, the BCM supplies voltage to the automatic transmission shift lock control solenoid, releasing the mechanical lock on the shift lever as the solenoid energizes. The energized solenoid allows the driver to move the shift lever out of the PARK position. When the brake pedal is not applied, the BCM turns the control voltage output of the shift lock control solenoid OFF, de-energizing the shift lock control solenoid. When the transmission is in the PARK position, the de-energized shift lock control solenoid will prevent shifting as the lever is mechanically locked in the PARK position.

During remote start operation the BCM will de-energize the automatic transmission shift lock control circuit, locking the shift lever in the PARK position

BLANK

A

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